U.S. Department of the Interior
Bureau of Land Management

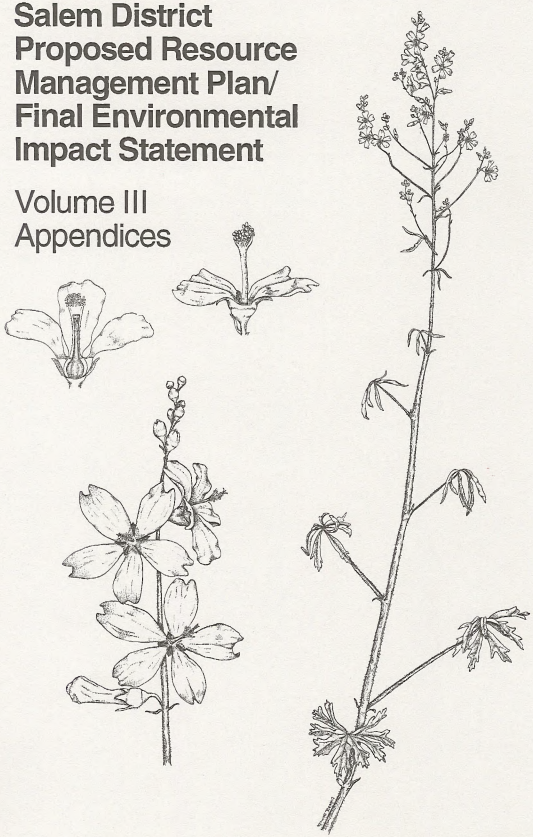
Salem District Office
1717 Fabry Road SE
Salem, Oregon 97306

FINAL

September 1994

Salem District Proposed Resource Management Plan/ Final Environmental Impact Statement

Volume III Appendices



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/ES-94/32+1792

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Chapter 5

Appendix II
Comment Letters from Federal, State, and Local Governments

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POSSIBLE QUESTIONS FOR MR. BIBLES
DECEMBER 16, 1992

From what we have seen of Wilderness Society and State Forestry comments on the BLM Resource Management Plans (RMP) there seems to be one area where comments are lacking: the economic side.

From my perspective the cost side of the planned activity is not addressed. There are two aspects of this: biological and financial.

The biological perspective is this. The most valuable species in our west side forests is Douglas-fir. It is best started in open ground and grows best without shade. Clearcutting and planting genetically improved stock is good biology. The RMP assumes that somehow it will be possible to put the 12-18 green trees to be left per acre in clumps so that the Douglas-fir can be free to grow. The possibility for this seems quite remote. As a consequence there will be shade, at least for a part of each day, cast over the area from the green trees.

In partially shaded areas there are other species in the west side forests that are better adapted to these conditions. They are species like the true fir and western hemlock. These are trees with slower growth rates and the wood produced is of lower value. So, the effect of the planned management activity is to produce less volume and the volume produced is of lower value. The State's comment on the proposed silvicultural management is that it is an untried procedure and strictly experimental.

This concern leads to these questions: How large is the margin of error in the growth predictions that you have for this new type of silviculture? In your growth calculations have you factored in the slower growth rate of the shade tolerant species that will likely make up future forests? In your calculations of income to counties have you factored in the lower value of the timber to be produced?

The economic concern is two pronged. The first is mentioned just above--lower growth rates and lower valued wood. The second is the value of the green trees that are left. Somewhere between $10,000 and $45,000 per acre will be represented in the left green trees in the form of stumpage value foregone. The trees are to be left and not harvested. This is effect makes each acre worth that much. In the preliminary spreadsheet I show what amount of future harvest will have to be on an acre just to carry different levels of investments at a very modest interest rate; higher rates would only make the figures higher.

The questions that come out of this: Have you shown clearly to all concerned what the actual cost of this new management system really is? The RMP uses very high future stumpage values to show that the cost is minimal. They assume that stumpage values will more than double in the near future: OSU planners for the McDonald Forest are using much more modest increases, in the way of 1% per year.

The answer to this question will be that we are ignoring all the other values, none of which are amenable to quantification in market terms of dollars and cents. So they say, for example, that saving the spotted owl and the murrelet produces a value in excess of all foregone timber values. So our real question is whether a majority of our society really knows and understands what the costs are of saving species that are listed as threatened or endangered. In every county and municipality the cost of foregoing timber harvest and forest growth will be enormous, and costs will continue to increase with time. Isn't the BLM bound to let each citizen know the cost side of their plan as well as the side which protects certain wildlife? Make no mistake, the RMP imposes costs on every citizen of Oregon no matter where they live. The difference in cost between the old plan and the preferred alternative should be clearly shown on both a per capita and a total basis.

Finally, in the process of letting the public know the costs of the plan, two additional aspects of cost need to be addressed.

The state argues cogently that BLM will need greatly increased budgets to carry out this new management, that it will be much more costly in terms of manpower to effect. Are you convinced that with the budget deficit reductions which we hear are to be put in place that you can succeed in getting the necessary increases in the BLM budget?

The effect of reduced timber harvest must result in one of two adjustments in the way we meet our building material needs. Either we import timber from other countries or use substitute materials. In the first case we export our environmental problems overseas to meet society's needs. In the second case a shift to other materials--steel, concrete, aluminum--all of which use fossil fuels that result in significantly higher environmental impacts than well tended forests and the products therefrom.

We urge that the final RMP-EIS address these questions in a forthright manner.

Rep. Liz VanLeeuwen, Homeaddr: 37070 Irish Bend Rd, Halsey, OR 97348

Rep. R. Starr, 1545 Tallman St. SW, Albany, OR 97321, (503) 926-9972

Merlin Green, Rural Rt 1 Box 1187, Halsey OR. 97348

LINN COUNTY BOARD OF COMMISSIONERS 393

RICHARD STACH, Commissioner
DAVE SCHMIDT, Commissioner
JOEL PODNICK, Commissioner

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(503) 967-3808 FAX: 926-4520

RALPH E. WYATT, Administrative Officer

December 21, 1992

Bureau of Land Management
Salem District Office
1717 Fabry Road SE
Salem, OR 97306

Dear Sirs:

The Linn County Board of Commissioners appreciates the opportunity to respond to the Salem District Draft Resource Management Plan and Environmental Impact Statement. The Board considers the relationship between our agencies to be a positive and constructive partnership. We particularly appreciate the working relationship directed toward community revitalization and outdoor recreation development in eastern Linn County.

The planning issue that impacts the residents of Linn County the most seriously is the major reduction in Allowable Sale Quantity (ASQ) to about 57% of the "no change alternative". This reduction will result in significant reductions in logging and mill jobs as well as reduce the services provided by the County. Ultimately, the tax base will decline and public service demand will increase due to the reduction in family wage jobs in Linn County.

We believe that there are good reasons to increase the ASQ above that projected in your Preferred Alternative (PA). Rather than elaborate in this letter, please refer to the responses received from the Association of O & C Counties for comments reflecting those of the Linn County Board of Commissioners.

The recreation development in the Quartzville Creek and Green Peter Reservoir areas is very much supported. The future development of the BLM peninsula adjacent to the reservoir is believed to be a very important enhancement to the potential recreation experience in this area. The development of a hiking trail "over the hill" from Crabtree Lake to Quartzville Creek likely would be a project that the Board would wholeheartedly support. We would like to have more information on this as the planning process progresses. Likewise, the dedication of the Quartzville Creek road as a "National Back Country Byway" is supported by this Board providing the other commercial uses are not limited by this designation.

The Board very much appreciates the efforts of BLM personnel in providing information and assistance to Linn County. We urge you to consider our views and look forward to an outcome that will provide stability and the best possible quality of life for Linn County residents.

Sincerely,

LINN COUNTY BOARD OF COMMISSIONERS

Joel Podnick, Chairman

Richard Stach, Commissioner

David R. Schmidt, Commissioner

Wm Manning - District Manager
Salem District BLM
1717 Fabry Rd. SE
Salem, OR 97306

December 21, 1992

RE: The Salem District Advisory Council Comments on the BLM Salem District Land Use Plan and Preferred Alternative.

Dear Mr. Manning:

Please find attached the report of the BLM Salem District Advisory Board regarding the District Land Use Plan & Proferred Alternative.

As you are aware we have had many work sessions. I do believe that our report represents a minimum of 500 hours of work. We discussed and studied the various positions presented. The report reflects the consense reached after much deliberation. Therefore, we as a Council reaffirm our prior work to you. The footnotes are reflective of some members of the Advisory Council.

The Advisory Council has requested that I direct the following concern to you.

1) The ASQ in the preferred alternative will result in a negative return of investment for the O & C Counties. These counties have invested more than one billion dollars on timber resource management since the 1960's. Some portion of this money will be lost because the timber can not be harvested. Therefore, the ASQ in the PA will result in a negative return on investment for the counties (one-third of their 75% estimated at one billion dollers since the 1960's). If these funds had been invested in timber they could have been spent in the communities for other services.

We request that the BLM mitigate this loss and lessen the community instability by reducing the rotation age. The Council feels that 13 MMBF could be gained by moving from a 80 year to a 60 year rotation for the GFMA.

We believe the BLM has a responsibility to the people of these communities. It should mitigate the impact of these abrupt changes in management policy.

Respectfully submitted,

Gratia Robertson, Chairperson
Salem District Timber Advisory Council

2) The BLM should attempt to control all insects and diseases by all means necessary in order to prevent their spread.

3) We must make our own best judgments without being totally constrained by the Endangered Species Act. People and community stability are factors that are not being sufficiently accounted for under present interpretations of the ESA.

4) Community Stability: Approximately 50% of Oregon is held by the federal government. Traditionally much of this land has been utilized for economic activity. This activity provided employment in the high wage base forest products area and the numerous support activities. Presently Oregon's economy is 38% timber based. These jobs which are in the rural sectors of the state account for almost 100% of the employment base. (The rural sectors have been defined as those areas outside the greater Portland, Eugene and Bend triangle.)

There are strong influences being exerted on this state at the national level regarding the uses of the federal lands. The west and the northwest in particular have experienced tremendous pressures to redirect the utilization from economic activity to environmental, recreational and aesthetic values.

The northwest is unique regarding the impacts from the recreational and environmental movements which were driven by the affluent 1980's. The impact of the reduced timber cut and effect on the people and communities of Oregon is a very real concern. Within the last 5-8 a monumental shift has taken place in natural resource allocation. This shift has had a massive effect on the people and communities of Oregon. Their viability and welfare is a very real concern.

ISSUE 1 - TIMBER

GENERAL OBJECTIVE; Manage lands allocated to timber production to optimize yield and maximize economic return.

MANAGEMENT GUIDELINES. Establish a scientific non-agency task to review non-suitable commercial forest land designation on large land areas. Set rotation length to maximize economic return to the public. Meet or exceed Oregon Forest Practice Act guidelines. Implement an aggressive program to improve/maintain forest health, specifically to control insects and disease infections. Use prescribed fire consistent with state law. Continue to participate in the Oregon state system on forest fire control. Keep the annual timber sale level near recent historical levels as in current plan.

FOOTNOTE

The following comments and recommendations are a minority report from the District Advisory Council. While we do affirm the past work of the group and concur with the direction taken on most issues, we would like our opinions and recommendations for the following issues placed into the record of the Advisory Council by your consideration in developing the final resource management plan for the Salem District.

TIMBER -

We believe that the alternative chosen in the Draft RMP is a reasonable compromise. However, questions arise as to the long term sustainability if assumptions on the proposed practices are implemented and fail to produce the projected desired future condition. The inclusion of volume expected from the 80 year deferred cutting zone calculations for sustained ASQ will result in overharvest on GFMA lands if the volume does not become available in the future. Also, the practice of using volume control to calculate ASQ on the GFMA lands, and area regulation on the GFMA lands will result in inequities and overharvest of some areas. The information provided to the council by John Moore on ASQ computations was helpful in an attempt to determine the ASQ. However, all alternatives discussed were not by a unit to overall ecosystem management and on the assessment of management objectives for all resource values. We therefore recommend that some of these possibilities be considered in the final plan.

ISSUE 2/3 - OLD GROWTH AND HABITAT DIVERSITY

VOTE WAS 7 TO 2

MAJORITY OPINION

GENERAL OBJECTIVE. Retain, maintain or reestablish old-growth and/or mature forest habitats within the limits of the management guidelines to meet various resource objectives, and manage habitat to support populations of native wildlife species.

MANAGEMENT GUIDELINES. Through 200-year rotation maintain 6 percent of the total district's land base in old growth cycle.

MINORITY OPINION

GENERAL OBJECTIVE. Same as above.

MANAGEMENT GUIDELINES. Through 200-year rotation maintain 6 percent of the total district's land base in old growth 200 year old forest at all times.

OPERATING CONCEPT.

Old growth and other set-asides should be done together - that is dual purpose.

Footnote

The general objective as outlined by the majority of council members is adequate. The problem lies in attaining the objective in a minority opinion. The harvest of timber from the Santiam and Santa Cruz is considered experimental and should be monitored closely for effectiveness and validity of the action. Harvest in any other forest should not be done or considered until these experimental harvesting practices are proven valid. Preferred harvest values in the remaining areas should not be included in the districts sustainable volume until there is monitoring information to show that harvest can be carried out in a manner that protects older forest ecosystem values. The use of commodity areas for linkage in conjunction with improved riparian management areas and other special

habitat protection measures in the preferred alternative should allow an improvement in habitat diversity over past practices.

ISSUE 4 - THREATENED AND ENDANGERED SPECIES

GENERAL OBJECTIVE. Protect federally listed threatened or endangered plant and animal habitats and manage resources to prevent future federal listing of plants and animals as threatened or endangered species.

MANAGEMENT GUIDELINES. Manage all BLM-administered lands to support the conservation and protection of all federal candidate, state listed, and bureau sensitive species and their habitats. Mitigate where economically feasible.

Footnote

Past forest management practices although well meaning have led to restrictive measures to protect certain species. This issue may well drive all future decisions regarding forest management of federal lands. The minority recommendation is that the ecosystem approach to land management as proposed by the BLM is the first step in recognition of all resources being important questions as to the BLM is to be commended for moving in this direction with innovative questions and a willingness to accept changes in forest management. The minority recommendation is that BLM develops to insure the habitats of T and S species.

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ISSUE 5 - SPECIAL AREAS

GENERAL OBJECTIVE. Provide special management for selected BLM-administered lands to prevent irreparable damage to important historic, cultural or scenic values; to protect botanical or fish and wildlife resources or other natural systems or processes; and to protect life and safety from natural hazards.

MANAGEMENT GUIDELINES. Provide special management for the areas listed under "PA" on the attached matrix.

Potential Special Areas

Alsea Bay Island	Y	Y	Y	Y	Y	X	
Yampo			Y	Y	Y	-	sell, exchange
Walker Flat			Y	Y	Y	X	no ACEC
Wells Island	Y	Y	Y	Y	Y	X	
Wilhelt Springs			Y	Y	Y	X	
White Rock Fen			Y	Y	Y	X	manage timber
Shafer Creek/Creb.			Y	Y	Y	X	
Yellowstone Creek			Y	Y	Y	-	RNA/ONA
Forest Peak			Y	Y	Y	-	no spec. desig.
North Santiam	Y	Y	Y	Y	Y	X	no spec. desig.

** Keep managing timber in secondary zone.

Dec.0315d Y = meets common alternatives criteria;
X = preferred by Advisory Council

Existing Special Areas	Alternatives A	B	C	D	E	PA	Remarks
Crane Mtn.		Y	Y	Y	Y	X	RNA
Mary's Peak		Y	Y	Y	Y	X	
Sandy River		Y	Y	Y	Y	X	"
Williams Lake		Y	Y	Y	Y	X	
Snoosp Meadows		Y	Y	Y	Y	X	150 acres
Carolyn's Crown		Y	Y	Y	Y	X	RNA
Middle Santian Terrace		Y	Y	Y	Y	X	
High Peak-Bear Cr.		Y	Y	Y	Y	X	RNA
Sharidan Peak		Y	Y	Y	Y	-	no spec. desig.
Big Canyon		Y	Y	Y	Y	X	
Elk Creek		Y	Y	Y	Y	X	**
Nestucca River		Y	Y	Y	Y	X	**
The Butte		Y	Y	Y	Y	X	RNA
Saddleback Mtn.		Y	Y	Y	Y	X	RNA
Little Sink		Y	Y	Y	Y	X	RNA
Valley of the Giants		Y	Y	Y	Y	X	
L. Grass Mtn.		Y	Y	Y	Y	X	
Yaquina Head	Y	Y	Y	Y	Y	X	Cong. desig.
Lost Prairie		Y	Y	Y	Y	X	
Rickreal Ridge		Y	Y	Y	Y	X	
Loreh Mtn.		Y	Y	Y	Y	X	
Willamette River Parcels	Y	Y	Y	Y	Y	X	

Appendix II

ISSUE 6 - VISUAL RESOURCES

GENERAL OBJECTIVE. Manage BLM-administered lands to reduce visual impacts of management activities and to enhance visual (scenic) quality.

MANAGEMENT GUIDELINES. Provide VRM classes I through IV management using allocations in the current MFP (approximates alternatives B).

The vote was 6 to 3. MAJORITY OPINION

GENERAL OBJECTIVE. Establish riparian management areas (RMAs) on perennial streams, lakes, ponds and other waters, to meet Oregon Forest Practices Act requirements, Oregon water quality standards and to retain biological diversity in these high value habitat areas.

MANAGEMENT GUIDELINES.

All activities would be designed to meet enhanced Oregon Forest Practices Act (OFPA) requirements and Oregon water quality standards.

Foot notes

The Riparian Management Widths as outlined in the predominant alternative are acceptable to the minority. The following additional guidelines which were previously submitted as minority recommendations are suggested for inclusion in the final plan. Any existing riparian widths the BLM should consider leaving all wood for wildlife habitat as a first priority. In areas adjacent to RMAs modify timber harvest as necessary to protect vegetation within the RMAs. Logging, road building and site preparation methods should be designed to minimize the number and/or size of mass soil movements and to maintain the integrity of the RMAs. Activities such as mining, recreation and ORV use should be regulated to protect water quality. Streams and riparian related areas to maintain water quality, fish habitat and/or wildlife habitat. All activities should be designed to meet or exceed Oregon Forest Practices Act (OFPA) requirements and Oregon water quality standards. Written agreements should be obtained or established with municipalities which use water from BLM-administered lands for public water systems.

ISSUES 7 AND 8 - WATER/RIPARIAN/WATER QUALITY

GENERAL OBJECTIVE. Establish riparian management areas (RMAs) on perennial streams, lakes, ponds and other waters, to meet Oregon Forest Practices Act requirements, Oregon water quality standards and to retain biological diversity in these high value habitat areas.

MANAGEMENT GUIDELINES.

1. For allowable timber sale quantity calculation purposes, use the following RMA widths for perennial streams:

Stream Order	RMA width[1]	
1	25'	(minimum)
2	50'	(average)
3	75'	(average)
4	100'	(average)
5	140'	(average)
6	160'	(average)
Lakes, ponds and other waters	100'	(average)

[1]Distance from edge of water in feet. Actual RMA widths would be determined by on-the-ground riparian vegetation, terrain and stream characteristics. Non-perennial streams would have RMAs designated if beneficial uses warrant.

2. Within first and second order RMAs, harvest commercially valuable trees in accordance with Oregon Forest Practice Act (OFPA) requirements.
3. Within third and higher order RMAs, consider no lands "available" for intensive timber management (i.e., offered for sale as part of the allowable sale quantity). Some timber harvest may occur, however, to achieve resource management objectives. These activities may include road construction and yarding corridors across streams and riparian zones to facilitate timber harvest outside the RMA. Timber harvested in yarding corridors would be left or moved into the water to provide fish habitat.
4. In areas adjacent to RMAs, modify timber harvest as necessary to protect vegetation within the RMAs.
5. Logging, road building and site preparation methods would be designed to minimize the number and/or size of mass soil movements and to maintain the integrity of the RMAs.
6. Activities such as mining, recreation and ORV use would be regulated to protect water quality.

ISSUE 9 - RECREATION RESOURCES

GENERAL OBJECTIVES. Provide developed and dispersed recreation opportunities.

MANAGEMENT GUIDELINES.

1. Continue to manage 12 existing developed sites. Within these sites, consider no lands available for intensive timber management. Some harvest may occur for purposes of removing dead, down or dying trees and removing trees for purpose of expanding recreation facilities.
2. Consider developing 11 potential recreation sites but continue to manage the sites using a partial timber harvest regime.
3. Do not designate the following areas as special recreation management areas (SRMA); Nestucca River, Crabtree Lake and Marys Peak.
4. Designate Green Peter Peninsula as an SRMA: prepare a coordinated resource management plan, develop recreation facilities, manage timber using a partial harvest regime. (5 votes for this option; preference for size was 4 for 400 acres and 1 for 2,100 acres)
5. Designate Mt. Hood Corridor as an SRMA: prepare a coordinated resource management plan, continue to manage developed

recreation facilities, no planned harvest our timbar within 1/4 mile of Highway 26.

6. Continue to manage 7 existing developed trails (3 trails are in special management areas; 4 trails are in areas managed for timber production).
7. Develop the potential Nastucca Rivar trail (located within the riperian zone) and the potential Green Ramar trail (located with riperian zones, fregile sites and areas managed for timber production.
8. Do not change management plans on areas continguous to existing or proposed trails.

ISSUE 9A - WILD AND SCENIC RIVERS (revised)

GENERAL OBJECTIVE. Manage designated wild and scenic rivers.

MANAGEMENT GUIDELINES.

1. Manage four Congressionally-designated rivar segments consistent with their designation and approvad, site-specific management plans.
2. Do not study additional river segments for suitability and do not provide interim protection for additional river segments.

ISSUE 10 - LAND TENURE ADJUSTMENT

GENERAL OBJECTIVE. Make land tenure adjustments to improve management efficiency and benefit resource program objectives.

MANAGEMENT GUIDELINES.

Establish the following land tenure adjustment zones:

1. Zone 1 - This zone includes areas currently identified as having high public resource values and other efficiently managed lands. Generally, they would be retained in public ownership.
2. Zone 2 - This zone includes areas that are suitable for exchange because they form discontinuous ownership patterns, are less efficient to manage than zone 1 lands, and may not be accessible to the general public. Where appropriate opportunities are identified, these BLM-administered lands may be exchanged for other lands in zones 1 or 2, transferred to other public agencies, or given some form of cooperative management.
3. Zone 3 - This zone includes lands that are scattered and isolated with no known unique natural resource values. Zone 3 lands are available for use in exchanges for private inholdings in zone 1 (high priority) or zone 2 (moderate priority). They are also potentially suitable for disposal through sale if not important values are identified during disposal clearance reviews and no viable exchange proposals for them can be identified. Zone 3 lands would also be available for transfer to another agency or to local governments as needed to accommodate community expansion and other public purposes.

   Use the following guidelines in initieting and/or reacting to specific land tenure adjustment proposals:

   1. Exchange O&C lands to acquire lands which would enhance timber management opportunities.
   2. Exchange public domain lands to benefit one or more of the resources managed.
   3. Sell and/or lease O&C lands (other than available commercial forest lands) and public domain lands that meet any of the criteria of FLPMA section 203(a).
   4. In zones 2 and 3 lease or convey lands under the Recreation and Public Purposes Act to provide appropriate facilities or services (e.g., recreation sites, rurel fire stations, and water treatment plants).

ISSUE 11 - RURAL INTERFACE AREA MANAGEMENT

GENERAL OBJECTIVE. Manage BLM-administered lands in rural interface areas to achieve agency management objectives for those lands while addressing conflicts with neighbors.

MANAGEMENT GUIDELINES. BLM forest management actions within 1/4 mile of rural interface areas shall be governed by compliance with the Oregon Forest Practices Act and the requirements of Land Conservation and Development. Local management is encouraged to work with adjacent property owners to address concerns and with local government to identify RIA concerns of BLM.

2) The BLM should attempt to control all insects and diseases by all means necessary in order to prevent their spread.

3) We must make our own best judgments without being totally constrained by the Endangered Species Act. People and community stability are factors that are not being sufficiently accounted for under present interpretations of the ESA.

4) Community Stability: Approximately 50% of Oregon is held by the federal government. Traditionally much of this land has been utilized for economic activity. This activity provided employment in the high wage base forest products area and the numerous support activities. Presently Oregon's economy is 38% timber based. These jobs which are in the rural sectors of the state account for almost 100% of the employment base. (The rural sectors have been defined as those areas outside the greater Portland, Eugene and Bend triangle.)

There are strong influences being exerted on this state at the national level regarding the uses of the federal lands. The west and the northwest in particular have experienced tremendous pressures to redirect the utilization from economic activity to environmental, recreational and aesthetic values.

The northwest is unique regarding the impacts from the recreational and environmental movements which were driven by the affluent 1980's. The impact of the reduced timber cut and effect on the people and communities of Oregon is a monumental shift has taken place in natural resource allocation. This shift has had a massive effect on the people and communities of Oregon. Their viability and welfare is a very real concern.

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CITY OF SALEM, OREGON
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December 17, 1992

Mr. Van Manning
Bureau of Land Management
Salem District Manager
1717 Fabry Road S.E.
Salem, Oregon 97306

SUBJECT: SALEM DISTRICT RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Dear Mr. Manning:

Based on the information in the R.M.P. and E.I.S., the following are our comments.

1. Preferred alternative

a. We feel that it is essential to buffer first and second order streams with a minimum buffer of 75 feet. In reference to ephemeral streams, headwater streams, and steep draws with gradients of 25 per cent or more, a 50 foot no-burn, undisturbed buffer of ground vegetation should be incorporated in the unit prescriptions. These small tributaries constitute greater than 79 per cent of the total stream mileage on the western side of the Cascades.

If we can control the quality of water entering these small streams, it will carry on down to the larger streams where 200 and 300 foot buffers are incorporated for fisheries. It is time to go to the top of the ridge, at the source of sediment loading to improve water quality.

b. With the new 1993 revisions on domestic drinking water standards, we feel that aerial herbicide spraying should be discontinued. A more direct application should be used. Aerial fertilization is also a concern with the new regulations. Buffers should be used when applying fertilizers. A 100 foot buffer should be used throughout the management area.

Sincerely,

Bill Light
Water Source Supervisor

cc: Dan Bradley, Water Superintendent
Hank Wujcik, Water Source Attendant
IMPCT.STA/HS/pew

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ASSOCIATION OF O & C COUNTIES

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December 16, 1992

Mr. Van Manning, District Manager
Bureau of Land Management
Salem District Office
1717 Fabry Road, SE
Salem, OR 97306

Dear Mr. Manning:

We welcome this opportunity to provide written comments on the Draft Resource Management Plan and Environmental Impact Statement (DRMP/EIS) for the Salem District.

Purpose of O&C Lands

By way of introduction, the Association of O&C Counties (Association) is an organization whose membership includes all 18 Oregon counties in which the 2.5 million acres of Oregon and California Railroad Reverted Grants Lands are located. In order to understand the Association's point of view relative to the management of resources on these lands, it is necessary to briefly recount the unique history of these lands, which were set aside long ago for the purpose of providing local community stability through the dominant use of these lands for timber production.

Beginning with the 1866 grant, the Revestment Act of 1916, and the 1937 O&C Organic Act through the present, these lands have been statutorily recognized as having a local purpose and they are to be managed for the stability of local communities and industries through the production of timber under the principles of sustained yield.

The 1937 Act directs the Department of the Interior to manage these unique lands under the conservation principles of sustained yield primarily for timber production and only secondarily for other, limited purposes listed in the Act. The Federal Land Policy

and Management Act of 1976 (FLPMA) specifically exempts the O&C lands from the provisions of FLPMA in the event of conflict with or inconsistancy between FLPMA and the O&C Act insofar as they relate to the management of timber.

The dedication of these lands to local purposes has inspired the counties, since 1953, to forego one-third of their statutory share of receipts (50 percent instead of 75 percent) through annual riders on Department of the Interior Appropriations Acts. The counties' annual relinquishment of one-third of their statutory entitlement has been based on the understanding that the foregone county monies would be appropriated for protection and intensified sustained yield timber production. This money was "invested" by the counties with the expectation that they would receive a "return" on their investment through increased harvest levels in future decades. Nearly one billion dollars of otherwise county revenue has been so appropriated since 1953. The federal government has, until recently, lived up to its part of the bargain, too. The result is that a highly productive, well-balanced forest has evolved that is second to none in the world. It has been estimated by the BLM that there was approximately 90 billion board feet of merchantable timber on these lands in 1937. The latest inventory stands at 49.7 billion board feet. With over 40 billion harvested since 1937, surely something has been done right and the concept of sustained yield timber production has been proven.

Judicial Affirmation of O&C Act

Recent judicial opinions have affirmed that the O&C lands are reserved for purposes different from other federal lands. Other federal lands are typically managed to accomplish national objectives. The O&C lands are to be managed for the benefit of the local economy and to promote community stability. Timber production is the dominant use for these lands.

This policy has been clearly and unmistakably confirmed by the U.S. Ninth Circuit Court of Appeals in the case of Headwaters vs. BLM. In that case, the Ninth Circuit stated, "...Nowhere does the legislative history [of the O&C lands] suggest that wildlife habitat conservation or conservation of old growth forest is a goal on a par with timber production, or indeed that it is a goal of the O&C Act at all."

This position has been clearly stated in previous cases by the Ninth Circuit. In 1987, the Court acknowledged "...the primary use of the revested lands is for timber production...." O'Neal vs. B.L.M.

This ruling was consistent with the prior statement of the Court that "[i]n 1937 Congress passed the O&C Sustained Yield

lands in your district is reduced as proposed in the Preferred Alternative. Thousands of individuals will be thrown out of work and the ripple effect throughout the timber community will be devastating. In addition, the revenues flowing to the 18 counties from sales of timber off these lands will be correspondingly reduced. At the very time when local governments need additional funds to deal with the tremendous human costs of reduced O&C harvests, those governments will have fewer funds available to meet the needs. This severe problem would coincide with rising adverse impacts from the recent property tax reduction measure of the Oregon constitution, which limits the ability of local government to raise revenues to replace lost O&C monies or other decreasing monies. (This results from the fact that many O&C counties receive a very small portion of the $10 per thousand dollars of assessed valuation available to all local governments because of their lesser dependence on property taxes historically.) This Association and the Association of Oregon Counties commissioned an analysis of the social impacts of timber harvest reductions in the O&C counties with Dr. Robert Lee of the University of Washington. (Lee, L. D., P. Summers, H. Risse, C. Nelson and J. Zientek, Social Impacts of Alternative Timber Harvest Reductions in the O&C Counties. University of Washington, 1991). Among Dr. Lee's many important findings were that the incidence of spouse or child abuse, alcohol or drug abuse and other manifestations of social stress increase in response to rising unemployment, at the same time that local providers of services in these areas find themselves with diminished capacity to respond to them in kind.

Dr. Lee's findings also discuss the impact of unemployment on individuals and suggested that the quick fix of timber worker retraining advocated by many may be easier said than done. He stated, "People experiencing high levels of stress often suffer from impairment of the cognitive functioning required for retraining or making other major life changes. Furthermore, stress related stresses can produce symptoms resembling the 'delayed stress syndrome' from which so many Vietnam veterans suffered. When coupled with stress originating from the blaming of loggers and other wood products workers for loss of life, and by the media and by government, many individuals are likely to suffer from both a loss of self-esteem and an impaired capacity to recover. Their capacity to make rational decisions concerning retraining and/or shifting occupations can be substantially reduced by such an accumulation of stress."

But, assuming that the individual displaced worker is able to work his way through and resolve these problems, there are still severe difficulties in viewing "retraining" as the complete solution to the social and economic problems likely to result from the large reduction in the ASQ as proposed in the Preferred Alternative. The facts concerning retraining in Oregon were discussed more fully in a memorandum filed with the Endangered Species Committee (ESC) on February 18, 1992, titled "O&C Counties'

Act...which provided that most of the O&C lands would henceforth be managed for sustained yield timber production." Skoko vs. Andrus.

In 1986, the Solicitor of the Department of the Interior rendered an opinion dealing with the O&C lands, in which he said, in part:

> "The freedom conferred to the Secretary [of the Interior]...is limited in one important way on certain federally-owned timberlands in western Oregon. There, any decision about managing northern spotted owls must be measured against the dominant use of timber production.
>
> "Plainly, on lands subject to its provisions, the O&C Act creates a dominant use--the production of timber on a sustained yield basis.
>
> "In deciding whether to establish a program for managing northern spotted owls on O&C timberlands, the Secretary, then, must first decide if it is possible to do so without creating a conflict with the dominant use there--timber production... If a program for managing northern spotted owls conflicts with producing timber on a sustained basis in O&C timberlands, the O&C Act will preclude the application to that reality. As the O&C Act instructs, on revested or reconveyed realty classified as timberlands in western Oregon, timber production is dominant." [Emphasis added.]

The Association is concerned that the DEMP/EIS contains no mention of this critically important history, nor makes any reference to the important judicial decisions which have been handed down relative to the O&C lands over the years. In fact, except for a listing in Appendix I-A, the document all but ignores the O&C Act.

Social and Economic Consequences

The Association is also very apprehensive about severe economic and social consequences which would follow from a decision by the Bureau to manage the O&C lands as set forth in the Preferred Alternative (PA) in the DEMP/EIS. Many of Oregon's communities will be devastated if the Allowable Sales Quantity (ASQ) on the O&C

Post-Hearing Memorandum in Support of Exemption Requested by BLM." Affidavits and exhibits in the record of the ESC hearings substantiate the points made in these decisions. The BLM is already in possession of these supporting materials.

Of the thousands of timber and wood products workers who have lost their jobs in the last three years, most have been unable or unwilling to obtain job retraining. There are significant barriers to serve those currently unemployed and additional funding in significant amounts is unlikely to serve a flood of newly unemployed.

The typical worker who actually is able to enter a job retraining program is male, 43 years of age, has been in the wood products industry for over 15 years, and has a 12th grade education. Thirteen percent of those who entered such programs are high school dropouts and another 12 percent are over 55 years of age. Many workers laid off from the timber and wood products industry have spent their working years in that industry and have lived their entire lives in communities where the wood products industry is economically and culturally dominant.

Of those who do make their way into job retraining programs, the placement success has been disappointing. Retrained persons in unemployment, however, will result in a reduced placement rate. One expert has stated, "Dislocated workers are already being absorbed into the job market at nearly the maximum rate possible--the job market is already saturated with dislocated workers, whether retrained or not."

In addition, for those who make it into retraining, then complete retraining, and are placed, there is almost always a substantial reduction in wages from those earned in the wood products industry. In Lane County, the average is $2.00 per hour reduction. In Douglas County, the average is a $3.50 per hour reduction. In Coos County, the average wage reduction for those lucky few who make it into and out of retraining is $4.64 per hour.

The costs of retraining are substantial. The most obvious costs are the direct retraining costs. These range from $300 to $5,449 per worker trained. Other costs include PELL grants, which run from a few hundred dollars to $2,600 per worker trained, and unemployment benefits, which normally are $238 per week for anywhere from 10 weeks to 39 weeks, to exhaustion of benefits. In Coos County, the average time on unemployment is 32 weeks; that is expected to increase to 48 weeks in 1992.

From the foregoing, the following conclusions are inescapable:

- Funding is adequate to provide retraining to only one-third to one-half of those currently unemployed.
- Substantially increased funding is not available.

- For those who are served, the job placement rate may decline in the future.
- Any increase in unemployment will be met with lower retraining success rates.
- Those who are placed in new jobs suffer substantial wage reductions.
- Job retraining is expensive.

These are very real and severe economic and social consequences and all effort should be made to mitigate sgainst these impacts.

Recommendation for Proposed Action

The O&C Act, its history, and the judicial decisions which have been rendered relative to it and the impact on local government revenue and services, lead us to the conclusion that the most appropriate alternative for the BLM to select for the Proposed Action is Alternative B. Essentially, this would continue the current land use allocations coupled with the advantage of an updated timber inventory. We urge you to give Alternative B careful consideration when deciding upon the Proposed Action for your Resource Management Plan.

However, if it is determined that compliance with the Endangered Species Act (ESA) precludes the adoption of Alternative B, the Association can reluctantly accept the Preferred Alternative on the condition that certain changes are made to provide for an increase in the ASQ. We condition our support of the Preferred Alternative because of our view that the Preferred Alternative goes beyond the requirements of the ESA and represents an exercise of discretion by the BLM that is not allowed by the O&C Act. It is our firmly held position that the O&C Act requires that the timber harvest be set at the highest sustained level to meet the statutory requirement for community stability and that deviations from such harvest level can only occur in response to other mandatory federal laws such as the ESA. While we are not opposed to management for non-timber values, such management should occur within this framework. As it stands, the Preferred Alternative does not appear to recognize the constraints of the O&C Act, nor does it appear to solely couple reductions in harvest levels with the requirements of the ESA.

All this having been said, it may be that the philosophy of the Preferred Alternative, "ecosystem management," can still be utilized within the proper statutory framework. This would depend in large part on whether harvest levels under the Preferred Alternative could be increased to bring them more closely in compliance with the harvest levels required by the community stability requirements of the O&C Act, while not exceeding

We have also suggested to the State Director that guidance with respect to programmed timber harvest activities within the RMA be re-examined. As we understand the guidance, the only timber harvest permitted within RMAs is harvest of trees in support of resources other than timber and for limited crossings of RMAs for logging roads and yarding corridors. In other words, acres within RMAs is not included in the base acreage used to compute the ASQ, and a programmed timber harvest will not be taken from RMAs. We wish to point out that the Oregon Forest Practice Act Rules provide for growing and harvesting timber within riparian management areas to the extent that certain stocking requirements are met. The Oregon Forest Practice Act Rules contain very specific guidelines for the numbers and sizes of conifer trees to be left per 1000 feet of stream length for riparian management areas of varying width. While full sustained yield production is not possible under the state rules, at least some timber production is permitted. If silvicultural systems applicable to the Old Growth Emphasis Areas (OGEa) and/or Connectivity/Diversity Cas were applied to the RMAs, we estimate that the ASQ could be increased by an estimated 1.5 MMBF. As we understand, two key building blocks of the conceptual framework around which the Preferred Alternative was developed were that "resource uss and protection can occur in harmony" and that "stewardship is essential to long term ecological health and social well being." You have implemented these concepts in your management program for both the OGEAs and CAs, and have provided for the programmed harvest of timber on a sustained yield basis from such areas. If the concepts of management noted above are appropriate for OGEAs and CAs, then certainly the concepts are also appropriate for management of RMAs, including the programmed harvest of timber on a sustained yield basis. Therefore, we have recomended to the State Director that the guidance with regard to RMAs be amended to provide for programmed timber harvest from such areas subject to the rules for live tree retention set forth in the Oregon Forest Practice Act Rules.

In summary, if Alternative A guidance for RMAs were substituted for Preferred Alternative guidance to allow a reduction in acreage allocated to RMAs, and if such guidance were also amended to permit a programmed harvest from RMAs, such changes should result in an aggregate increase in the ASQ of an estimated 4.5 MMBF.

Minimum Harvest Age (MHA)

The concept of minimum harvest age was adopted in planning for the 1980's and its use has been continued in planning for the 1990's. The only issue is the youngest age at which timber will be subjected to regeneration harvest. From our examination of the DNMP/EIS, it appears that the MHA was set at 50 years. However, a sensitivity analysis carried out shows that an increase in ASQ

restrictions imposed by the ESA. This would require a very careful balancing of obligations by the BLM.

Opportunities to Increase Allowable Sale Quantity

Based upon our review of the information set forth in the DNMP/EIS, we believe strongly that several opportunities do exist for moderate increases in the ASQ to the point where the required balance might be achieved. These opportunities relate to the allocation and management of riparian areas, the choice of minimum harvest age, adoption of departure from the nondeclining harvest level, and updating the timber inventory. The increase in ASQ to be expected from these opportunities should serve to lessen the impact on timber dependent communities of the precipitous drop in ASQ proposed in the Preferred Alternative. The increase, if sufficient, would also serve to insure that management is in compliance with the O&C Act. These opportunities, and projected increases in ASQ, can be made in such a way as to minimize through modest changes in such guidance without upsetting the basic concept around which the Preferred Alternative was designed. We have requested the State Director to make such changes to the State Director's Guidance. Each of the opportunities will be discussed separately.

Riparian Management Areas (RMA)

We see an opportunity for change within the Preferred Alternative guidance for riparian area protection to provide for an increase in the ASQ. Under Preferred Alternative guidance applicable to riparian areas, some 40,600 acres have been allocated to RMAs and timber harvest removed from acreage which is not programmed timber harvest on a sustained yield basis. This large acreage dedicated to riparian area protection is some 7.4 percent increase in the acreage allocated for similar purposes under the current plan. According to the DNMP/EIS, all alternatives meet the minimum legal requirements for the protection of riparian areas, thus as few as 24,300 acres of RMAs as designated in Alternative 1 may meet legal mandates. This being the case, it appears that the allocation of 40,600 acres to RMAs, as proposed in the Preferred Alternative, may represent significant overprotection of one resource to the detriment of another. We suggest that a more reasonable and balanced approach would be to substitute Alternative A guidance for Preferred Alternative guidance with regard to RMA allocations. If Alternative A guidance were used, some 16,300 acres of forest land could be restored to the sustained yield timber production base. According to the sensitivity analysis addressing different levels of riparian protection, the ASQ could be increased by 3.0 MMBF by this action. We have recomended to the State Director that Alternative A guidance for RMAs be adopted for the proposed Resource Management Plan (RMP).

could be realized if the MHA constraint was released. This increase would amount to 18.9 MMBF. The DNMP/EIS does not indicate to what age the MHA would drop if unconstrained. If releasing the constraints on MHA would result in regeneration harvest of timber less then 40 years old, we recommend that the MHA be constrained at 40 years. Other options to consider would be to set MHA at one age class lower than the MHA used in the Preferred Alternative or at the age of first merchantability.

We have recommended to the State Director that the guidance for the Preferred Alternative be amended to include one of the MHA options described above. Either option could add upwards of 18.9 MMBF to the ASQ and help make a most difficult timber supply situation for the timber-dependent communities and industries in the Salem District more tolerable.

Departure from the Nondeclining Harvest Level

Departure from the nondeclining harvest level is not something that public land managers normally decide to but there are times and circumstances when it may be the wise thing to do. We believe that now is the time to consider departing from the nondeclining harvest level for the General Forest Management Areas (GFMA) in order to provide for a temporary increase in ASQ during the next decade.

The amount of forest land available for intensive timber production has been drastically reduced under the Preferred Alternative. Under the current plan, 46.5 percent of forest lands were dedicated to intensive timber management; the Preferred Alternative for the 1990's dedicates only 19 percent of the forested acres to intensive timber management--a significant reduction indeed. The current ASQ for the Salem District is 239.0 MMBF. The ASQ proposed in the Preferred Alternative is 124.0 MMBF --a 43 percent reduction! Add to this scenario the reduction in timber output from the national forests in the vicinity and timber-dependent communities in western Oregon are faced with a dismal outlook for the future.

One way to help alleviate the situation, and to ease the impact of such a large reduction in ASQ, is to adopt departure from the nondeclining harvest level to permit a one decade increase in ASQ. Such an action would help provide for a transition from the high harvest levels of the 1980's to the reduced harvest levels projected for the future. We note that paragraph 3 of the March 18, 1983, O&C Forest Resources Policy Statement provides, as follows, for departure from the nondeclining harvest level

> "3. The allowable cut determination shall be based on nondeclining harvest flow. Departures from the nondeclining harvest level

may be permitted in any direction. Any increase shall not exceed the long-term sustained yield capacity of the land; decreases shall be economically and/or biologically justified and timed so as to minimize impacts on dependent industries and communities." (Emphasis added.)

We do not know exactly how much the ASQ might be increased by departing from the nondeclining harvest level, but suggest that a 11.4 MMBF increase might be a reasonable estimate based on a departure of ten percent. We note that the original proposed State Director Guidance required a sensitivity analysis for departure from the nondeclining harvest level for the Preferred Alternative. However, this requirement was apparently dropped because the DRMP/EIS does not indicate that such an analysis was undertaken. It should be carried out to establish the level of increased ASQ.

We have recommended to the State Director that the guidance for the Preferred Alternative be amended to require departure from the nondeclining harvest level in order to add to the ASQ and contribute to community stability.

Updating Timber Inventory

The DRMP/EIS indicates that the inventory of forest lands to estimate the volume of timber present and the age class distribution of such timber was current as of October 1, 1988, and that the timber inventory was updated current to October 1, 1990, for purposes of computing the ASQ for the various alternatives described in the DRMP/EIS. The updating was necessary to account for depletion of existing timber inventory due to timber sales and for accretion of timber inventory due to growth to arrive at an updated starting inventory for ASQ calculation purposes.

If the proposed RMP is implemented on October 1, 1993, as planned, five years will have passed since timber inventory was completed. We recommend that the starting inventory for the purpose of calculating the ASQ for the proposed RMP be updated current to October 1, 1993. This should not pose a problem because of the fact that little or no timber is likely to be offered for sale during F. Y. 1993. Also, we wish to point out that for the past five years timber sale offerings have been substantially below the volume of timber that should have been offered for sale in accordance with the timber management plan approved in 1983. Therefore, it appears that accretion of timber volume will far exceed depletion of timber volume and hence the net effect should be a starting inventory volume substantially greater than the starting inventory volume used to calculate the ASQ for the various alternatives described in the DRMP/EIS. Because a higher starting inventory volume should have a positive effect on the ASQ, we

emphasize the importance of updating the timber inventory to October 1, 1993.

Opportunities Summarized

This Association is very concerned about the large drop in ASQ proposed in the Preferred Alternative. We are not convinced that such a drastic reduction in ASQ is absolutely necessary. Rather, we do believe that there are ways to increase the ASQ above that proposed in the Preferred Alternative, and still adhere to the basic conceptual framework used to design the Preferred Alternative.

We believe that modifications to the Preferred Alternative with regard to riparian area protection, minimum harvest age, departure from the nondeclining harvest level, and updating the timber inventory to October 1, 1993, could add at least an estimated 34.9 MMBF to the ASQ. As noted above, we have requested the State Director to revise the policy to permit the changes we have recommended.

Comments on DRMP/EIS

We have attached hereto comments specific to the Salem District DRMP/EIS which are included in and make a part of this response by reference.

We are grateful for the opportunity to comment on these critically important issues. The future of much of western Oregon is dependent on the decisions which you and the other districts make relative to the management of these lands for the next decade.

Sincerely,

Rocky McVay

Rocky McVay
President

Attachment

COMMENTS SPECIFIC TO:

SALEM DISTRICT DRAFT RESOURCE MANAGEMENT PLAN

AND ENVIRONMENTAL IMPACT STATEMENT - AUGUST 1992*

VOLUME I

Summary

The allowable sale quantity (ASQ) is discussed under the topic of "Timber" (page xiii) and treated as a total for the commercial forest land base. The ASQ is also reported similarly in Table S-1. We believe it would be helpful if the ASQ were reported by land allocation and by intensive management practice. For example, we understand the total ASQ to include production from the General Forest Management Areas (GFMA), the Old Growth Emphasis Areas (OGEA) and the Connectivity Areas (CA). In addition, the production from the GFMAs is made up of the base volume plus volume derived from the several intensive management practices. We suggest a tabular display be used to report the ASQ on both a cubic foot and board foot basis; we also suggest that the long term sustained yield (LTSY) be displayed in the table. See Exhibit 1 for an example of such a table.

We believe it is important to keep the ASQ segregated by land allocation because of the difference in assumptions used to compute the ASQ for such allocations. We also believe it is important to identify for each intensive management practice the ASQ contributed by such individual practices.

Chapter 1

We were disappointed that the Draft Resource Management Plan and Environmental Impact Statement (DRMP/EIS) was published for public comment without a discussion of the O&C Sustained Yield Act of 1937 and the relationship of said Act to the Federal Land Policy and Management Act of 1976 (FLPMA). The O&C Act is a unique piece of legislation which has guided the management of the O&C lands of western Oregon for over 55 years. The O&C Sustained Yield Act was accorded a special exemption by Sec. 701 of FLPMA insofar as the management of the timber resource is concerned. The purposes of the O&C Act and the Sec. 701 exemption are very important to this planning effort and need to be discussed in these planning documents.

*It is not our intent to make a detailed page by page review of the entire Draft Resource Management Plan and Environmental Impact Statement. Rather, we limit our comments to several specific items/concerns that we feel need to be addressed.

We believe this is important because the Resource Management Plan (RMP), once adopted, will become the blueprint for managing BLM lands in the Salem District for the next ten years. As new managers come upon the scene, their first action will be to become intimately familiar with the RMP in order to effectively carry out their duties and responsibilities. Without some discussion of the O&C Act in the RMP, the full significance of the O&C lands and the purpose of these lands will very likely be lost. This is of serious concern to the eighteen O&C counties, particularly after having invested nearly one billion dollars of county funds in the O&C lands during the past 40 years to pay for a level of intensive management that very likely would not have been undertaken otherwise.

We urge you to include a discussion of the O&C Act and its purpose in the plan. We suggest that you review some of the mailers published early on in this planning effort which discussed the O&C Act and the relationship to FLPMA. In our opinion, Chapter 1 seems to be the appropriate place to include such a discussion.

Chapter 2

Included in Chapter 2 is a section entitled Cost of Management (page 2-41) which addresses in a very general way the costs likely to be associated with implementing the various alternatives. A distinction is drawn between "traditional timber management" and "non-traditional timber management" with the Preferred Alternative considered as non-traditional timber management. The discussion points out that costs of traditional timber management "would be consistent with past management costs for this purpose" but that "costs of non-traditional timber management as proposed in the Preferred Alternative...would be much higher per unit of timber sold than for the other alternatives." In fact, the document states that "preliminary cost estimates indicate that these costs, in the first decade, would be about 2.8 times traditional costs per unit output."

Unfortunately, the discussion of the cost of implementing the Preferred Alternative stops at this point and the reviewer is left to ponder the question of increased costs and the budget needed to implement the plan. We feel the abbreviated discussion of costs, particularly when costs of the Preferred Alternative are projected to be so much higher, is a serious oversight in the DRMP/EIS. We recommend that you remedy the oversight in the proposed RMP/EIS with a full and complete discussion of the costs of management for the chosen Proposed Action together with an estimate of the budget requirements needed to implement the plan.

Chapter 3

No comment.

Chapter 4

In our opinion the section entitled "Effects on Timber Resources" (page 4-38) does not adequately analyze the effects other resources have on the timber resource nor are such effects quantified in terms of ASQ reductions. As you point out, "The ASQ depends on (1) the number of acres available for timber production, (2) the intensity of management, (3) the site quality of the land, and (4) the initial inventory." Accommodations for other resources are most likely to affect the number of acres available for timber production and the level of management on such lands. For example, allocation of suitable commercial forest land (SCFL) to special area designations will reduce the land base available for timber production and this action will result in a reduction in ASQ; allocation of SCFL to the biological diversity concept of management will influence the type of timber management practiced on these lands and this, too, will result in a reduction of the ASQ. What is needed in this section of the proposed RMP/FEIS is a discussion, resource by resource, of the likely effects that enhancement and/or protection of each such resource will have on the availability of SCFL for timber production purposes and the impacts that such reductions of SCFL will have on the ASQ. It is our opinion that you must address the effects of the various resources on timber production in order to meet the requirements of the National Environmental Policy Act just as you must address the effects of timber harvest on the variety of other resources being managed. (We suggest you review the Medford District DRMP/EIS and the way that Medford handled "Effects on Timber Resources.")

In addition to a discussion of the effects of the various resources on timber production, we recommend the inclusion in the proposed RMP/FEIS of a table showing for the Proposed Action the acreage of Suitable Commercial Forest Land (SCFL) allocated for enhancement and/or protection of each of the several resources together with the reduction in ASQ attributable thereto. Alternative B should be the starting point (acres of SCFL and ASQ) with incremental reductions of SCFL and ASQ until the level of the Proposed Action is reached. We chose Alternative B as the base for comparison because Alternative B is the alternative which most closely reflects compliance with the purpose and intent of the O&C Act. See Exhibit 2 for an example of a table to array the data. We make this request because we believe that decision makers and the public need to know with some precision the amount of timber production which will be forfeited in the enhancement and protection of resources other than timber.

Table 4-23 shows the ASQ for the several alternatives for six different time periods. We direct your attention to our opening discussion in the Summary. We suggest that Table 4-23 be restructured to permit detailing the ASQ by land allocation, i.e., GFMAs, OGEAs and CAs, and that for the GFMAs, the ASQ be disaggregated to the intensive management practices. We also suggest that the long term sustained yield (LTSY) be displayed for each alternative. The reason we ask for the LTSY is because consideration of a departure from the nondeclining harvest level is constrained by the long term sustained yield capacity of the land.

Chapter 5

No comment.

Chapter 6

We note that you have dropped the term "dominant use" from the glossary, even though the term was included in the glossary for the Analysis of the Management Situation published in January, 1991. We urge you to include the term in the glossary for the Resource Management Plan. After all, the term "dominant use" has more relevance to the management of the O&C lands than does the term "multiple use" which has been included in the glossary.

VOLUME II - APPENDICES

Chapter 1

No comment.

Chapter 2

We suggest you include in Appendix 2-A a description of the procedures used to compute the allowable sale quantity for the Preferred Alternative (and/or Proposed Action). We believe this is necessary in order to describe how the following components were handled in computing the allowable sale quantity: (1) retention of a portion of the stand at harvest; (2) development of stands with multiple canopy layers; (3) maintenance of wider tree spacing by means of a series of density management cuttings; (4) management on longer rotations; and (5) expected timber yields from stands so managed.

Since the current timber volume for the Salem District is based on a 1987-1988 timber inventory, we suggest you also include in Appendix 2-A a description of the procedures used to update the timber inventory to the present time and a tabular display of the results of the update.

Chapter 3

No comment.

Chapter 4

We suggest you include a sensitivity analysis in Appendix 4-A to determine for the Preferred Alternative (and/or Proposed Action) the ASQ for a departure of ten percent above the nondeclining harvest level, provided that the resulting increase in ASQ does not exceed the long term sustained yield capacity. We suggest you also determine the highest level of departure permissible during the first decade which is within the LTSY constraint.

Exhibit 1

Allowable Sale Quantity by Land Allocation and Practice

		ALTERNATIVE					
Land Allocation/Practice		NA	A	B	C	D	E	PA*
GFMA								
Base	MMCF							
	MMBF							
PCT	MMCF							
	MMBF							
Fert.	MMCF							
	MMBF							
Stand Con.	MMCF							
	MMBF							
Genetics	MMCF							
	MMBF							
OGEA	MMCF							
	MMBF							
CA	MMCF							
	MMBF							
TOTAL	MMCF							
	MMBF							
LTSY	MMCF							
	MMBF							

*Preferred Alternative (and/or Proposed Action)

Exhibit 2

Effects on Timber Production Resulting From

Enhancement of Other Uses

(Alternative B Compared to Proposed Action)

	ASQ		
	ACRES (SCFL)*	MMCF	MMBF
Alternative B (Baseline)	264,900	43.9	280.5
Less:			
Air			
Soils			
Water Resources			
Biological Diversity			
Vegetation			
Riparian Zones			
Wildlife Habitat			
Fish			
Special Status Species			
Special Areas			
Cultural Resources			
Visual Resources			
W&S Rivers			
Recreation			
Energy & Minerals			
Rural Interface Areas			
Total Reduction			
Proposed Action			

*Available for intensive management

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Tillamook County
Land of Cheese, Trees and Ocean Breeze

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BOARD OF COMMISSIONERS
Tillamook County Courthouse
201 Laurel Avenue, Tillamook, Oregon 97141

December 21, 1992

Van Manning, District Manager
Bureau of Land Management
Salem District Office
1717 Fabry Rd. SE
Salem, OR 97306

RE: 1610 (080.4)

Dear Mr. Manning:

Thank you for the opportunity to review and comment on the proposed District Resource Management Plan. Enclosed please find our comments and recommendations.

Please do not hesitate to contact us if you have any further questions.

Sincerely,

Jerry A. Dove, Chairperson

Ida A. Lane, Vice Chairperson

Kenneth M. Burdick, Commissioner

AN EQUAL OPPORTUNITY EMPLOYER

BLM RESOURCE MANAGEMENT PLAN

SALEM DISTRICT - TILLAMOOK COUNTY RESPONSE

1. Although there is a recognized need for forest land management on an ecosystem approach, the aggregate Allowable Sale Quota (ASQ) for all districts fails to meet the requirements of the O&C Act of 1937.

2. There is a concern about the level of yield within Tillamook County to ensure the economic sustainability of the wood products industry in the immediate area.

3. BLM should assume primacy in the management of its lands and not relinquish control to other agencies who manage for a single resource.

4. The management of O&C lands and Public Domain lands should be delineated separately, with each land category managed to recognize the differing statutory mandates.

5. We support the management technique proposed for OGEA-2 and urge that it be implemented at the level proposed. Research and monitoring is encouraged during implementation to allow the application of this technique within other OGEA's where appropriate. The use of this technique in such areas on a continuing basis would assist in achieving the goals of the O&C Act.

6. The implementation of OGEA's should correspond to any reduction in the size of DCA's in the Final Spotted Owl Recovery Plan or in federally listed critical habitats.

7. In areas where BLM is emphasizing management for purposes other than timber production, BLM should consider land exchanges with State and private owners, and should work with all forest land owners to identify areas where resource values and economics could benefit from these types of land exchanges.

8. If any anadromous fish becomes listed as a T&E species there could be substantial negative economic impacts. Therefore if listing of coastal runs is to be avoided, fisheries enhancement measures should be among the highest priorities, and federal land managers should remain aggressive and committed to fisheries habitat enhancement.

9. Areas set aside under Riparian Management Areas (RMA's) should be limited to the minimum regulatory widths adjacent to rivers, lakes and streams. The proposed plan includes within the Land Use Allocation for RMA's large areas outside the minimums established by state and federal rules for riparian setbacks.

Although the plan does propose that actual RMA widths would be delineated by ID2's and be determined by on-the-ground conditions, this approach may be subject to challenge on the basis that any reduction in width could not be made without a supplemental EIS, because the Land Use Allocations in the plan were driven by an EIS. In other words, a party in a NEPA action or other court challenge might argue that, because the RMA's were delineated under a Land Use Allocation based on an Environmental Impact Statement, those widths could not be changed (reduced) from a more restrictive category to a less restrictive category without reopening the environmental review process for each location where such reductions were later proposed. Obviously such a supplemental EIS would not be practical for the many locations where this would be expected to occur, and the Land Use Allocation would become intractable and permanent for RMA's.

If, on the other hand, Land Use Allocations for RMA's were based on the regulatory minimums, there would be nothing to prevent BLM from later expanding those widths because conditions on the ground required such expansion of an RMA. In such a case going from a less restrictive to more restrictive application would be defensible and could be accomplished without reopening the EIS process.

There is a great deal of confusion and inconsistency within the RMP on this issue. Management intent should be more clearly stated. The Land Use Allocation for RMA's should either reflect only the regulatory minimums or eliminated altogether in favor of an approach which views riparian management as an operation function of Plan implementation.

LINN COUNTY BOARD OF COMMISSIONERS

RICHARD STACH, Commissioner
DAVE SCHMIDT, Commissioner
JOEL FOSDICK, Commissioner

Linn County Courthouse
P.O. Box 100, Albany, Oregon 97321
(503) 967-3925 FAX: 926-4225

RALPH E. WYATT, Administrative Officer

December 21, 1992

Bureau of Land Management
Salem District Office
1717 Fabry Road SE
Salem, OR 97306

Dear Sirs:

The Linn County Board of Commissioners appreciate the opportunity to respond to the Salem District Draft Resource Management Plan and Environmental Impact Statement. The Board considers the relationship between our agencies to be a positive and constructive partnership. We particularly appreciate the working relationship directed toward community revitalization and outdoor recreation development in eastern Linn County.

The planning issue that impacts the residents of Linn County the most seriously is the major reduction in Allowable Sale Quantity (ASQ) to about 57% of the "no change alternative". This reduction will result in significant reductions in logging and mill jobs as well as reduce the services provided by the County. Ultimately, the tax base will decline and public service demand will increase due to the reduction in family wage jobs in Linn County.

We believe that there are good reasons to increase the ASQ above that projected in your Preferred Alternative (PA). Rather than elaborate in this letter, please refer to the response received from the Association of O & C Counties for comments reflecting those of the Linn County Board of Commissioners.

The recreation development in the Quartzville Creek and Green Peter Reservoir areas is very much supported. The future development of the BLM peninsula adjacent to the reservoir is believed to be a very important enhancement to the potential recreation experience in this area. The development of a hiking trail "over the hill" from Crabtree Lake to Quartzville Creek likely would be a project that the Board would wholeheartedly support. We would like to have more information on this as the planning process progresses. Likewise, the dedication of the Quartzville Creek road as a "National Back Country Byway" is supported by this Board providing the other commercial uses are not limited by this designation.

Bureau of Land Management -2- December 21, 1992

The Board very much appreciates the efforts of BLM personnel in providing information and assistance to Linn County. We urge you to consider our views and look forward to an outcome that will provide stability and the best possible quality of life for Linn County residents.

Sincerely,

LINN COUNTY BOARD OF COMMISSIONERS

Joel Fosdick, Chairman

Richard Stach, Commissioner

David R. Schmidt, Commissioner

BOARD OF COMMISSIONERS
180 NW 5th Street
Corvallis, OR 97330-4777
(503) 757-6800
FAX (503) 757-6893

December 21, 1992

DEC 23 1992

Dean Bibles, State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear Mr. Bibles:

Benton County offers the following comments on the Western Oregon Draft Resource Management Plans/Environmental Impact Statements (dated August 1992). Our substantive comments are directed at the Salem District Resource Management Plan--Environmental Impact Statement. The Salem BLM District includes the Alsea Resource District of which a total of 57,000 acres are located in Benton County.

Background

Benton County supports the efforts of the Bureau of Land Management, through these draft Management Plans to provide a sustainable approach to resource management for the plans' anticipated 10 year implementation period. We note that the Salem District Plan calls for a 50 percent reduction in annual timber harvest activities within the Alsea Resource District. This reduction in harvested timber will have a considerable impact on the forest industry and wood processing employment within Benton County. These harvest level reductions will accelerate reductions in the local labor force employed in forest industries, transportation, and wood processing. Industry wide employment reductions are a continuing consequence of uncertainty of future timber harvest levels on federal land within Oregon's coastal region and labor force restructuring throughout the forest industry. Since January 1992, total employment within Benton County in lumber product industries has declined by 130 positions (source: Labor Trends, State of Oregon Employment Division, Dec. 1992).

Benton County Supports the Preferred Alternative listed in the Salem District RMP/EIS

The Salem District Resource Management Plan/Environmental Impact Statement addresses the relevant legal mandates, provides for the continued flow of commodity resources from the former Oregon and California Railroad Lands, and actively protects the natural values on these public lands. These issues are difficult to balance in light of competing public objectives and commodity resource priorities. However, in recognition of the need to balance complex public policy objectives and assure the continued flow of timber from BLM resource lands in Western Oregon, the Benton County Board of Commissioners supports the Preferred Management Alternative for the Alsea Resource Area as discussed in the draft Salem District Resource Management Plan/Environmental Impact Statement (dated August 1992).

By eliminating the current uncertainty about harvest levels on BLM lands in Benton County, this draft plan will have a positive impact on private sector forest based industries. And as soon as possible after formal adoption of the Management Plan for the Alsea Resource Area, it is vital to Benton County's economy that timber harvest contracts and other forest management activities consistent with the approved final plan be initiated.

Below, we have commented on specific issues within the Salem District Resource Management Plan/EIS that have direct implications, or of particular concern, to Benton County.

1. Cooperative BLM-BentonCounty Land Use Planning on Rural Interface Lands

The Salem District Resource Management Plan defines interface areas as concentrations of private land zoned in 1 to 20 acre parcel configurations that adjoin BLM lands in Benton County. Benton County works in close cooperation with BLM staff as well as with other public other agencies concerned with natural resource management to avoid conflicts between residential home dwellers and forest management activities. Benton County, through its Comprehensive Plan and Development Code, has specific provisions to limit land uses that are inconsistent with forest management activities and discourage construction of non-resource dwellings in its Forest Conservation-80 and Forest Conservation-40 zones. The county also requires that any new dwelling be set aback at least 300 feet from resource lands.

Benton County is currently revising its Forest Ordinances and zoning standards to be consistent with the new Goal 4 forest protection requirements of the Oregon Land Use Planning Program. The Salem District BLM office has provided a detailed map that identifies all BLM holdings in Benton County. This map has allowed county staff to precisely identify the location where significant portions of the Alsea Resource Area abut private forest land holdings in Benton County. This information will be an important planning tool as Benton County up-dates its resource zoning and addresses the designation of Small Scale Resource Land Zones (i.e. secondary lands) during the next eighteen months.

2. Consistency of the Salem District Draft RMP/EIS with the Benton County Comprehensive Plan

Based on review by the county's Development Department, the Salem District Plan's Preferred Alternative is consistent with the Natural Resource and Hazards Element (pp. 7-25) and Parks and Recreation Element (pp. 58- 65) of the Benton County Comprehensive Plan.

3. Recreational Issues Addressed by the Salem District Draft Management Plan--Increase BLM Recreational facilities in Benton County

Economic diversification by Benton County's rural communities into a variety of non-timber dependent activities has been underway for the past decade. In Alsea and the Lobster Valley area, recreational activities are bringing a much needed infusion of tourism and visitor generated cash expenditures to communities that have no other local employment opportunities and lie outside commuting distance to employment in Corvallis, Albany, and Philomath. The Alsea River corridor, Lobster Creek, and the Mary's Peak area have some of the most outstanding fishing, hunting, and outdoor recreation opportunities of the entire Coast Range. Tourist based visitor days to Benton County are on the increase with the Benton/Corvallis Chamber of Commerce reporting a 17 percent increase in motel occupancy rates for the summer of 1992 over past years. Tourism is an important element of Benton County economic diversification strategy and it is important to build on the opportunities available in the BLM managed Alsea Resource Area.

Benton County, in response to increased demand along the Alsea River, is establishing a new campground facility. There also may be new opportunities for shared management and maintenance of recreational facilities by Benton County, BLM, and the Alsea District of the United States Forest Service. Benton County staff are prepared to work together with Salem District BLM staff and staff representatives from the Siuslaw National Forest on this issue.

In response to the growing demand for recreational opportunities by both Willamette Valley residents and tourists, the text of the Draft Plan should clearly state how new or improved recreational facilities (e.g. campsites, trails, interpretive kiosks) and the proposed Multiple Use Area on Mary's Peak will enhance public recreation opportunities. The text included under Chapter 4--Environmental Consequences (pp. 55-56) suggests that BLM contemplates reductions in recreational facilities in the Alsea Resource Area. BLM and Forest Service camping facilities are already at or near full capacity for much of the year. In order to be consistent with the Salem District's Draft Plan's goal of reducing detrimental impacts to communities arising from reductions in annual timber harvest levels, enhancement of recreational opportunities and new facility construction should be made a high priority in the Alsea Resource Area.

4. Benton County supports the decision to not designate any Wild or Scenic Waterways in the Alsea Resource Area

Benton County, based on concerns expressed by private property owners located along the Alsea River, supports the Draft Plan's decision under the Preferred Alternative to not include any portion of the Alsea River or Lobster Creek for consideration as a federally designated Wild or Scenic River.

5. Designation of a Benton County Contact Person

Benton County puts a high priority on inter-agency coordination of land use planning and policy development activities. Please feel free to contact Roger Irvin, Director of Development, if you or your staff have any further questions regarding these issues.

Sincerely,

Kent Daniels
Chairman

Pam Folts
Commissioner

John Dilworth
Commissioner

cc: Bob Saunders, BLM Salem District Office
Gil Raiddell, Association of Oregon Counties
Director, Benton County Public Works Department
Director, Benton County Parks Department

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management and provide a comprehensive, long-term framework for restoring forest systems to levels that mimic pre-settlement structure and function.

GENERAL COMMENTS:

To attain a comprehensive management strategy and achieve a sustainable forest ecosystem, the BLM needs to (1) identify the ecosystem variability that occurs naturally within each watershed under its jurisdiction, (2) clearly define the short and long-term goals for replicating the natural scale, pattern, and composition of various seral conditions within their land base, (3) identify the variation, intensity, and significance of the principal natural factors responsible for creation of pre-settlement forest conditions, and (4) develop clearly defined implementation strategies for each land use allocation.

Each District management scheme, which encompasses its mapped land use allocations (GFMAs, RHAs, OGEAs, and Cha) in conjunction with particular management objectives, needs to reflect the landscape level patterns resulting from disturbance regimes of varying frequencies, durations, and intensities. None of the draft RMP/EISs adequately describe how the conversion of existing old-growth forests into managed forest systems with old-growth characteristics will provide for the compositional, functional, and structural attributes of a natural forest ecosystem.

While using deferred harvest and long rotations in some management areas, extended rotations in other areas, and applying structural retention in some non-deferred OGEAs and Cha, the Preferred Alternatives still allocate approximately 75% of BLM's forest lands (1,662,000 acres) to the commercial timber base over the long-term and propose commercial harvest of 302,000 acres of remnant old-growth forests (greater than 200 years old) with full implementation of the plan. It is important to note that no unruly, natural old-growth forest outside of the Special Management Area designation will be left unmanaged following implementation of the preferred dept.

Given the short supply of old-growth forest systems in western Oregon and the critical status of some wildlife species dependent on or closely associated with old growth ecosystems, the Service recommends that the District maintain existing old growth, where possible, for the life of the plan. This would allow greater options for management of old growth dependent species in future planning efforts.

SPECIFIC COMMENTS:

Watershed Management. The "Preferred Alternative" predicts that proposed management activities will degrade current conditions within 18 analytical watersheds (9 AOA) in the Salem District. With 6 watersheds expected to decline significantly, the Service feels that reallocation of management prescriptions are necessary to avert damage to an important resource base and avoid potential impacts to aquatic habitat and water quality. Stand management activities, such as harvest prescriptions, silvicultural methods, and rotation frequencies, need to be tailored to particular watershed characteristics and conditions to minimize impacts and address fish and wildlife species of concern. This may require establishing wider buffers along stream channels, reducing harvest levels, and limiting new road construction.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Portland Field Station
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266

MEMORANDUM

December 21, 1992

TO: Salem District Manager, Bureau of Land Management, Salem, OR.

ATTN: Van Manning

FROM: Field Supervisor, Portland Field Office, Portland, OR.

SUBJECT: Review of Draft Environmental Impact Statement (DEIS) and proposed Resource Management Plan (RMP) for the Salem District.

The U. S. Fish and Wildlife Service (Service) offers the following comments for your consideration in preparing the final RMP/EIS for the Salem District.

We commend the Salem staff for organizing a complex array of information and formulating an exceptional draft document. Integrating ecological, economic, and social considerations for the management of 329,000 acres of forestland, identified as suitable for timber production, presents a challenging task. The draft RMP/EIS illustrates a conscientious effort to balance local interests and concerns as well as a commitment to restore biological diversity and old-growth forest characteristics through timber management and habitat protection.

The Service supports the Bureau of Land Management's (BLM's) efforts to manage its resource lands from an ecosystem perspective and to broaden its scope to include values beyond timber production. Land managers such as the BLM have been given a public trust to maintain the natural systems in their care at self-sustaining levels. Maintaining a full array of productive and healthy ecosystems, which replicate the variety and distribution of regional landscapes, will provide the values supporting species abundance, productivity, and diversity, and the goods and services of sustained timber production.

Franklin et al., 1981, state that habitat diversity contributes to ecological stability, which in turn sustains the natural components of a forest system. Water yields, soil and fungal productivity, heterogeneity of microclimate, and fish and wildlife populations can be sustained in perpetuity with ecologically sound management practices. Past timber management practices with simple focus objectives, short rotations, and clearcut harvest regimes have fragmented and destroyed habitats, altered the current age and spatial distribution of plant communities, locally and regionally extirpated numerous forest-dependant species, and rendered certain species vulnerable to extinction. BLM's proposal could become a model plan for future forest

Old Growth Emphasis Areas (OGEAs). It is difficult to determine, from the information provided, whether or not the proposed 80-year harvest deferment for OGEA allocations will provide adequate time to determine if management practices can effectively create old-growth characteristics. Sufficient data, which supports a reasonable level of certainty for attaining old-growth characteristics, needs to be gathered prior to regeneration harvest of the 130,900 acres allocated as deferred OGEAs. We recommend that until adequate information is established to justify commercial harvest, the OGEAs be excluded from Salem's "allowable out" calculations (ASQ).

Parameters for determining the "benchmark" characteristics of old-growth structure and function need to be established prior to the initiation of trial harvesting programs in the 53,000 acres of "non-deferred" OGEAs (OGEA-2, OGEA-3). The Service recommends deferring immediate regeneration harvest in non-deferred OGEAs, i.e. the Nestucca OGEA, until peer-reviewed criteria have been established.

The Service does support limited experimentation in younger, even-aged stands in the interest of gaining a broader based data-set and developing operational guidelines for establishing old growth characteristics. To accelerate the development of old growth characteristics, innovative silvicultural activities and multiple species regeneration management are encouraged on a small scale to gain the empirical data and confidence levels necessary for manipulating habitat on a large scale.

General Forest Management Areas (GFMAs). Timber management activities following harvest need to focus on re-establishing greater vegetation heterogeneity between rotations to support greater wildlife diversity in the GFMAs. The Service encourages the use of silviculturel systems that strive to recreate (or retain) the composition, structure, and function of the natural system being harvested. Retention of structural components (live trees (conifers and hardwoods), snags, woody debris) and regeneration of natural species mixes in numbers and patterns that resemble the stand and site are fully supported by the Service. Structural and floral retention systems offer the potential to insure long-term site productivity and sustainable timber yields and maintenance of habitat niches, biological diversity, and natural ecosystem process.

Riparian Management Areas (RMAs). Of the 416 wildlife species described in Brown (1985), 84% (359 species) use riparian zones or wetlands during part of their life cycles. With such a heavy reliance on wet areas by a significant portion of the vertebrate species, it seems appropriate that the BLM attempt to maintain the integrity of riparian systems with greater potential possible. The Sales plan indicates that only 28 percent of the second order and larger streams within the District's management area are in good or good condition and 42 percent are in minimal condition (page 3-35). Riparian habitat along smaller streams (first order, perennial and intermittent) tends to be in the poorest condition. These conditions can generally be attributed to road construction and forest management practices.

The RMP/EIS describes the importance and values of riparian zones in the context of perennial stream systems, but only refers to first and second order headwater streams in the context of impacts incurred through timber harvest activities (page 3-37). The RMP needs to explain how headwater stream

conditions affect downstream conditions and overall system integrity. McComb and Hager (1992) and Renchler and Hall-Jeffers (1992) indicate that 20 species of riparian obligate vertebrates seem to be sensitive to timber harvest in or adjacent to riparian areas in Oregon. Nine of these are associated with headwater streams.

Declining fish stocks throughout the Pacific Northwest can be attributed to degradation and loss of critical habitat. The potential of a stream to support fish production is directly related to the quantity and quality of aquatic and riparian habitat. Changes in riparian areas through vegetation removal increases water temperatures and siltation rates in wood, gravels, decreases food availability, depletes supplies of large-woody debris, and ultimately reduces overall productivity in the system.
The Salem District has an opportunity to become proactive in the restoration of stream and riparian habitats. Populations of fish and wildlife can be expected to increase in direct proportion to Riparian Management Area specifications and management guidelines.

Given the value of stream systems to fish and wildlife populations and the degraded condition of most drainage systems in the Salem District, the Service supports optimal protection of fisheries and wildlife habitat in riparian zones and recommends incorporation of riparian management into alternative "E" into the Preferred Alternative. This would establish minimum buffers along both perennial and intermittent streams and limit harvest activities within them in accordance with stream order. It is further suggested that Best Management Practices be developed and applied for protection of headwater areas and first and second order intermittent streams.

THREATENED AND ENDANGERED SPECIES.

General Comments:

The following comments are provided as part of informal consultation (1-7-93-I-100) pursuant to Section 7 of the Endangered Species Act of 1973, as amended. The Bureau has requested informal consultation on the Resource Management Plans. The Service will be providing an informal consultation document by January 15, 1993. The Service anticipates that formal consultation will be initiated by the Bureau once an alternative is selected. It is our understanding that a biological assessment (BA) will be forthcoming on the list species prior to initiation of formal consultation. We recommend that the BA include an evaluation of effects to proposed species, and Category 1 candidate species.

The federal status of several species are incorrectly noted in the Draft EIS. The needed changes are noted under Specific Comments. The final document needs to reflect the recommended corrections and reevaluate effects of the alternatives for each species with an incorrect federal status.

The document states the Recovery Plans for the bald eagle and peregrine falcon are being implemented on BLM lands. Development of site-specific management plans have been recommended in the bald eagle Recovery Plan and are equally useful in the management of peregrine falcons. The biological assessment should clarify whether site-specific management plans will be developed for these species. Because management on BLM lands alone may not be sufficient to

special status species. In addition, species such as Lupinus sulphureus var. kincaidi should be included.

Page 3-44, Animals. The Service recommends that a statement be made regarding the current level of monitoring and inventory for each species in this section.

Page 3-46, Peregrine Falcon. As recovery of this species progresses, there is potential for additional eyries to be established. To assure that new pairs are adequately considered during the evaluation of project impacts, there will be a need for periodic inventories of habitat. The Bureau should cooperate and coordinate with the Oregon Department of Fish and Wildlife on conducting periodic inventories and monitoring of productivity at existing eyries.

Table 3-12, Special Status Species. The marbled murrelet was listed as threatened on October 1, 1992. The Oregon chub was proposed as endangered on November 19, 1990. Table 3-12 should reflect the correct status noted above. Prior to publication of the final document, the Service recommends that the Bureau check the status of the Oregon chub, western snowy plover, and petitioned species, i.e. western pond turtle, spotted frog, northern red legged frog, and bull trout, for their current status.

Page 3-47, Bald eagle. The presence of communal night roosts on BLM lands should be discussed. See comments for Page 2-12.

Pages 4-67, Bald eagle. This section only evaluates the availability of potential habitat for the bald eagle for each alternative. Since increases in recreation, road construction activities, and activities related to timber harvest may contribute to harassment and disturbance of bald eagles, measures which will be implemented to avoid and minimize impact should be addressed in the final EIS and in the biological assessment.

Appendix 2-32, Leasable Mineral Resources, Oil and Gas. The document states that the Mineral Leasing Act of 1920 provides that all publicly owned oil and gas resources be open to leasing unless a specific land order has been issued to close the area. Please explain what is a specific land order, whether there is more than one kind, or a brief description of the process involved in initiating one.

Marbled Murrelet. The sections covering marbled murrelets need to be expanded and corrected to address the murrelet's Federal threatened status. More research needs to be undertaken to determine what habitat characteristics are important for murrelets. Current definitions need to include acceptable ranges of suitable habitat. The current definition is too narrow and simplistic.

Page 3-47, Marbled Murrelet. A description of habitat should be presented.

Page 4-62, Marbled Murrelet. The description of murrelet habitat is unclear, confusing, and incomplete. The "120 years and older with light to moderate overstory" description lacks sufficient specificity to define suitable habitat requirements. Given the current distribution and availability of habitat, it is expected that implementation of any of the proposed

reduce threats to Federally listed species such as the bald eagle and peregrine falcon, the Service encourages the development of site-specific management plans in coordination and cooperation with adjacent private landowners and the Oregon Department of Fish and Wildlife wherever practicable.

The Draft states that bald eagles may be negatively affected by road management, recreation development, and off-road vehicles; and that peregrine falcons may be negatively affected by road management, recreation development, mineral exploration and development, and off-road vehicles. The Service also perceives that timber harvest activities, grazing allotments, and increased recreation pressure and/or development may potentially adversely affect listed and proposed species. The biological assessment should indicate what measures, i.e., initiation of inventories, development of buffers or site-specific management plans, consultation with the Service, etc., will be implemented to assure that these actions would not adversely affect listed species.

Monitoring of the species status on BLM lands will be important to provide early warning of adverse change. More specificity is needed in outlining monitoring procedures for listed, proposed and candidate species. The biological assessment should indicate how listed, proposed, and candidate species status will be monitored and identify the frequency, timing, and purpose of monitoring, e.g. occupancy, productivity, and/or specific threats.

Specific Comments:

Page 2-10 to 2-11, Special Status Species Habitat. This section provides a good concise description of how projects which may affect Federally listed species and critical habitat will be handled. The Service recommends that the biological assessment provide additional details on bald eagle areas which will be protected. The terms "protected" and "managed" should be clearly defined. Does "protected" imply that no type of habitat manipulation is allowed, e.g. prescribed fire? Can an area be managed and not be part of the ASQ? It is unclear whether the habitat sites mentioned include communal winter roost areas, such as the Klamath Basin, including Nine Mile, Scappoose Creek and Raymond Creek. These areas have been identified as bald eagle communal roost areas in the Working Implementation Plan for Bald Eagle Recovery in Oregon and Washington (WDW, 1989). The final EIS should be expanded to resolve these uncertainties.

Chapter 2, Special Status Species Habitat. The definition of "protected" and "managed" should be explained. Further clarification is advisable for Category 1 species. However, in some cases, e.g. aeral species, protection may require active management to maintain a certain degree of natural disturbance, e.g. fire, to prevent rapid vegetational community changes. The Service also recommends that monitoring be extended to all Federal candidate Category 1 species. With Category 1 species, available information indicates listing is warranted. If Category 1 species are not adequately monitored and protected from adverse effects, the Service may need to evaluate the appropriateness of emergency listing.

Page 2-42, Plants. The Bureau should expand on their list of special status species. All Federal candidate Category 1 species should be considered

alternatives would negatively impact the murrelet. In the long term, only limited increases in murrelet habitat are expected. This is likely not compatible with the recovery goals for this species.

Oregon Chub. The BLM needs to assess the effects of its proposed management allocations on watershed and stream conditions within the chub's range and propose remediation measures to offset any negative impacts.

Sensitive Species. The RMP needs to clearly define the scope and criteria used for site-specific protection of species that may be threatened or jeopardized by timber harvesting activities within all of the land use allocation categories. Increased funding allocations to support inventory work, field assessments of species habitat needs, and monitoring programs may be required to insure that no management actions will contribute to future listing of any sensitive species.

Spotted Owls.

General Comments:

Several portions of the Draft Resource Management Plan are not consistent with the draft Recovery Plan for the Northern Spotted Owl and raises potentially serious concerns for the survival and recovery of the spotted owl. These include management activities within the large areas managed for older forest species (OGEDs), dispersal within the network of OGEAs, and supplementing critically low populations in some of the large OGEAs. These issues will be discussed separately, though they contribute to the overall impacts of the RMP on spotted owls.

Several activities are proposed in deferred OGEAs that appear inconsistent with the draft Recovery Plan and other proposed management schemes. These include management activities within older second growth that currently meet at least dispersal condition and deferral of proposed harvesting for 80 years rather than withdrawal of the large blocks. The RMP states that management in deferred OGEAs will improve the future diversity of the stands, may speed the recovery of suitable spotted owl habitat, and will only occur in currently non-suitable habitat. Standards or guidelines should be provided to ensure actions will be limited to appropriate situations.

The RMP does acknowledge the increased risk to spotted owl caused by the uncertainty associated with the human management of forests to speed the development of older-forest characteristics and that the uncertainty that silvicultural systems will be successful in re-creating suitable habitat. Similar risk and uncertainties apply to the management proposed in the deferred OGEAs, non-deferred OGEAs, and connectivity areas. This risk should be evaluated and discussed. Again, standards or guidelines should be provided within the RMP to allow evaluation of the risk and impact to the recovery of the spotted owl.

The relatively short rotation and general management prescription for the Eastside River OGEA appears inconsistent with the maintenance of suitable spotted owl habitat. Given the young, intensively-managed condition of the current forest in this area, intermediate treatment to accelerate the development of stand diversity may be justified. However, given the critical

location of this block at the extreme northern end of Federal ownership in the Oregon Coast Ranges, development and maintenance of a viable spotted owl population in this area is crucial to eventual recovery of spotted owl populations in the northern Oregon Coast Ranges. Therefore, long term management should be altered to maintain suitable spotted owl habitat at the maximum level possible within the Nestucca River OGEA.

Large scale salvage within the OGEAs also carries uncertainty for the future condition of habitat within the OGEAs. Given the lack of knowledge concerning the development of forests following catastrophic events, it is difficult to determine the level of stand integrity necessary for natural recovery or speed development of natural condition. Therefore, large-scale salvage increases the uncertainty and risk of development of future old growth characteristics. The RNP should include an evaluation of the potential impact of salvage on future habitat conditions.

Given the currently low populations of spotted owls, especially in the Oregon Coast Ranges physiographic province, dispersal between the large deferred OGEAs and between provinces is critical to maintaining distribution and viability of spotted owls. The preferred alternative allows reduced dispersal condition for an unspecified time before all capable quarter-townships reach 50-vl-40 condition. More information on the potential length of this time period of the RNP on dispersal. Given the already critically low populations and habitat levels in the Oregon Coast Ranges, a limitation on dispersal condition in the short term would exacerbate the concern. The potential synergistic effects of low habitat, low population, and reduced dispersal on the survival of spotted owls should be addressed in the RNP.

The draft Recovery Plan includes provisions to provide additional habitat and protection for spotted owl pairs outside of the large blocks of habitat, where populations within the large blocks are too low to ensure short-term stability. This concept should be incorporated into the RNP. The current and short-term population condition within the deferred areas should be evaluated to determine the internal stability of these population clusters, and supplemented as levels to ensure cluster stability. Additional habitat should be provided to maximize the cluster effect. Short and medium term cluster stability is even more critical in light of the already limited dispersal condition in the Oregon Coast Ranges and impacts of the preferred alternative to the development of dispersal condition.

The RNP should contain an assessment of the viability of the spotted owl under the preferred alternative. The assessment should evaluate the viability of the spotted owl in the short term, lowest point in the habitat development, and long term. Improved habitat amounts and conditions 100 years in the future are of little value if the spotted owl populations are extirpated before habitat recovery. While the document included mention of risk in several areas, it contains no evaluation of spotted owl viability. The MaxLeyey model is used only to compare the alternatives, not evaluate viability.

The monitoring section of this document should be expanded and increased to include specific proposals with thresholds, trigger points, and courses of action. With this RNP, the BLM is attempting to manage forests in a manner different from all previous efforts. As a result, management prescriptions

includs numerous theoretical components that are as yet untested. Many of these prescriptions have the potential to affect listed species, particularly if the prescription fails to produce the desired condition. Therefore, the risk of failure carries serious consequences. The BLM discusses the concept of adaptive management in the RNP, but fails to carry that discussion to specific monitoring. Given the consequences of failure, monitoring plans should have specific thresholds and trigger points, and specified courses of action if thresholds are exceeded. In addition, experimental and theoretical procedures should not be implemented unless monitoring is included. If monitoring is not funded, harvest should not proceed.

The final rule designating critical habitat for the northern spotted owl (final rule) was published in December 1991. The RNP should include a discussion and evaluation of the impacts of the RNP on designated spotted owl critical habitat.

Specific Comments:

Page xvii, Column 2, Land Tenure. 0 & C forestland should not be excluded from exchanges for lands to be managed for T/E species under management purpose relative to listed species. Such a limitation appears to conflict with section 7(a)(1) of the Endangered Species Act, which requires all agencies to utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of... listed species. The Act defines conservation as "...the use of all methods and procedures which are necessary to bring an endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary. Such measures and procedures include, but are not limited to ... habitat acquisition and maintenance..." (also relative to Page 2-38.)

Page 2-34, Column 1, Paragraph 5. The RNP should describe how the short term management objective of providing for T/E species dependent on or associated with old-growth forest communities will be met on the OGEA areas, as stated.

Page 2-34, Column 2, Paragraph 2. The restriction of density management to stands not currently suitable for spotted owls is an excellent safeguard for short term management.

Page 2-34, Column 2, Paragraph 4/5. The location of the Nestucca River OGEA coincides with a DOA in the draft Recovery Plan. The proposed management within the OGEA appears inconsistent with the draft Recovery Plan. While some accelerated density management in this area might help improve conditions for spotted owls in the short term by accelerating the development of stand diversity in this heavily managed area, the 150 year harvest rotation and harvest prescription seem inconsistent with maintaining old growth characteristics in the area. This area is the furthest north block of Federal land in the Oregon Coast Ranges and is critical to the eventual recovery of spotted owl populations in that portion of the province. This area should be managed as a deferred OGEA once stands reach suitable habitat condition.

Page 2-38, Column 1, Paragraph 3. The presence and prescriptions for the OGEA-2 in the Crabtree Creek area should provide improved dispersal potential in this area.

Page 2-35, Column 1, Paragraph 6. The document indicates that the connectivity areas are intended to provide for timber harvest within the context of requirements for existing and future T/E species. It also indicates that critical habitat will be maintained in its current condition. The term "critical habitat" should be defined. The following discussion assumes this meant designated critical habitat. If so, the above statement/guideline should be altered to indicate that critical habitat should be allowed to improve in condition, not be maintained at current levels. Current levels are already below adequate in some critical habitat units.

Page 2-35, Column 2, Paragraph 3. This paragraph indicates that 80 to 100 acres will be "protected" around known nest sites outside of OGEAs and connectivity areas. The RNP should describe the standards under which these sites will be protected. Core areas of pairs or resident singles should be protected around each core area regardless of the ownership or land use in all land use allocations. Eighty to 100 acres of suitable habitat, not just acres, should be protected through additional, non just deferral. Core areas should be maintained regardless of the occupancy of the site. This will provide opportunities to manage spotted owls in the landscape. Management, particularly regeneration harvest, should not occur within core areas.

Page 4-19, Column 1, Paragraph 1. Provide information on the quality and distribution of suitable habitat, beyond simply stating that there will be more suitable spotted owl habitat under the preferred alternative after 100 years than currently available. Replacement of nesting quality habitat with forests meeting minimal foraging quality may still result in a reduction in the viability of spotted owls. This problem is intensified if a substantial portion of the habitat is scattered, and further exacerbated by the checkerboard ownership pattern common to Bat Lands. Provide information on the extent to which this development of habitat is dependent on the ability to create or speed the development of suitable habitat through silvicultural practices, an as yet unproven assumption.

Page 4-32, Column 1, Paragraph 4. Rather than assume that density management in the preferred alternative would adversely affect attainment or retention of suitable habitat condition, the RNP should contain an assessment of the risk or negatively affecting suitable habitats in light of the experimental nature of the density management prescriptions.

Page 4-40, Table 4-13. As demonstrated in this table, while the amount of habitat may increase in the long term, there is a short term loss of suitable habitat, extending to at least 50 years in some areas. The sponsoring text should discuss the effect of the short term loss of suitable habitat in the planning area on spotted owl viability. While the long term conditions are of interest, the short term impacts and an evaluation of conditions at the "lowest" point are critical to assessing the impacts to the species. Future habitat in of little use to the species unless adequate populations survive to take advantage of the habitat. This section should include a discussion of short and medium term effects, and the lowest point.

Page 4-42, Column 1, Paragraph 4. This section should provide an assessment of the effects of the preferred alternative on spotted owls in the Oregon Coast Ranges province, rather than simply highlight the importance of BLM lands to spotted owls in this province.

Page 4-42, Column 2, Paragraph 1. This paragraph and the following discussion mention the need for successful dispersal between these large habitat blocks. As discussed in the general comments, the RNP should indicate how this critical dispersal will be maintained.

Page 4-43, Column 1, paragraph 1 & 2. Very little information is provided to allow evaluation of the impact of the preferred alternative on dispersal condition. The RNP should provide a complete analysis of the impact of the preferred alternative, compared to alternative D, on dispersal condition and 50-vl-40. This should include short term, lowest point, and long term impact analyses, as well as impacts on a provincial basis.

Page 4-46, Column 2, Paragraph 4. Provide rationale or documentation for the statement that isolation "is not thought likely to be a factor" under the preferred alternative. Currently there is no ground or basis provided for this statement. Given the previous discussion of dispersal condition and the level of "management" in the area of concern, isolation appears to be a legitimate threat.

Page 4-47, Column 1, Paragraph 4. The document should include an evaluation of the level of risk to the stability of spotted owl populations under the preferred alternative, rather than simply qualify the risk as higher than Alternative D. Risk is critical to the determination of whether the preferred alternative is sufficient to meet the BLM objectives of contributing to the recovery of the northern spotted owl.

Many of the concerns for the suitability of habitat under Alternative C, such as the uncertainty associated with the human management and the uncertainty of the success of proposed silvicultural systems in recreating suitable habitats also hold for the Preferred Alternative. This should be evaluated relative to the risk of failure of the RNP.

Appendix J-6, Page J-25, Land Ownership Adjustment Criteria. The inclusion of endangered or threatened species habitat as a criterion for evaluating land acquisition or disposal is consistent with section 7(a)(1) of the Endangered Species Act, but appears somewhat in conflict with previous statements relative to OGC lands and land tenure.

Appendix J-8, Page J-53, Column 1. The BLM should provide its own monitoring program for spotted owls in the event that a recovery plan is not adopted immediately. Monitoring is a critical part of any plan, but carries even greater weight in a plan that incorporates numerous untested procedures that potentially impact listed species. To be effective any monitoring plan must include thresholds that will trigger re-evaluation and explicit courses of action if thresholds are exceeded. Monitoring plans should be developed prior to the adoption of the RNP to allow adequate evaluation of impacts of the monitoring to all aspects of the RNP. All actions should be tied to adequate monitoring. If monitoring is not funded, actions affecting the listed species should not proceed.

SUMMARY COMMENTS:

Appendix II

The draft RMP and EIS collectively provide the reader with a considerable amount of information that generally describes the proposed actions and expected results. In our opinion, the final documents would be considerably improved if they indicated: 1) a clear description of the long-term goals; 2) measurable short-term objectives and standards for each major resource issue, that if attained would lead to the desired future condition; 3) a detailed monitoring plan to assess the RMP's impact on the measurable objectives, including check points and/or milestones that signal the failure of a prescription and the need to change direction; and 4) a discussion of the funding needs to implement 1, 2, and 3 and the degree to which that funding could be expected.

Further, the Service strongly suggests that the selected or preferred alternative include: 1) protection of riparian habitats on all streams, including all first and second order/perennial and intermittent streams; 2) a comprehensive re-evaluation of existing old-growth and mature stands and interior old-growth habitats to insure the short-term maintenance and long-term enhancement of viable populations of old-growth-dependent wildlife species; and 3) structural retention timber management systems to support greater species diversity on the landscape.

Relative to the threatened northern spotted owl, the RMP differs significantly from the draft Recovery Plan. Specifically, the Service is concerned about the impacts of proposed management activities within the deferred OGSAs, provisions for dispersal between the OGSAs, and the lack of a viability assessment, given the continuing loss of habitat in the intermediate-term. The Service recommends that the preferred alternative include limitations on the management in the OGSAs and thresholds for dispersal condition on all forested lands. Given the untested nature of many of the proposed silvicultural prescriptions, the Service recommends that a detailed, sensitive, monitoring plan be developed and required prior to implementation of the plan.

Fish and Wildlife Service staff offer these comments in a spirit of partnership with the Salem District staff. The Bureau of Land Management has an exciting and unique opportunity to become a leading force in the restoration of forest ecosystems in Western Oregon. We once again want to commend the Salem District for recognizing the need to manage their lands for biodiversity and ecosystem viability.

REFERENCES CITED:

Boechler, J.L. and D.C. McAllister. 1992. "Riparian Classification and Protection Goals to Maintain Fish and Wildlife Populations on State and Private Forest Lands in Oregon." Oregon Department of Fish and Wildlife. Habitat Conservation Division., Portland, Oregon 90 pp.

Brown, R.R. (ed.) 1985. "Management of Wildlife and Fish Habitats in Forests of Western Oregon and Washington. U.S. Department of Agriculture, Forest Service. Publication No. R6-FWL-192-1985. Pacific Northwest Region.

Franklin, J.F. et al. 1981. "Ecological Characteristics of Old-growth Douglas-fir Forests. USDA- Forest Service. GTR-PNW-118. 48 pp.

process that provide adequate safeguards to assure that site-specific projects implementing the RMP will not adversely impact currently degraded watersheds. More spacifically, our environmental objections include the following:

- The high potential for further water quality impacts and beneficial use degradation in several streams and rivers that have serious nonpoint source pollution problems and/or are water quality limited;
- The lack of riparian zone protection for first and second order streams which may contribute to violations of water quality standards (WQS) and impacts to beneficial uses;
- The potential for adverse impacts to fisheries related to the prediction that 18 of the 27 analytical watersheds in the planning area will decrease in condition under the PA;
- The direct health and safety impacts of prescribed burning in rural interface areas and the indirect air quality impacts of the District firewood program;
- The use of an arbitrary ten year timeframe to distinguish between short-term and long-term resource impacts which could result in inaccurate impact assessments for biological populations with implications for adverse population or community-level effects;
- The potential for impacts to threatened species listed under the Endangered Species Act, including the northern spotted owl and the marbled murrelet; and
- The lack of RMP direction regarding future environmental analysis for site-specific project proposals.

The following additional information and clarification is requested:

- Preparation of sufficiently-developed management guidance to facilitate water quality analysis and to ensure that the existing water quality limited streams and rivers and other waters do not sustain violations of water quality standards and do not experience additional degradation of beneficial uses;
- Establishment of riparian zone protection for first and second order streams;

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

REPLY TO ATTN OF: WD-126

DEC 18 1992

Van Manning, District Manager
Salem District
Bureau of Land Management
1717 Fabry Road S.E.
Salem, Oregon 97306

Dear Mr. Manning:

The Environmental Protection Agency (EPA) has reviewed the draft Salem District Resource Management Plan (RMP) and Environmental Impact Statement (EIS), Bureau of Land Management (BLM), Oregon. Our review was conducted in accordence with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act, which directs EPA to review and comment on all federal draft and final EIS's. EPA provided scoping comments on the Proposed State Director Guidance on July 18, 1988, and on the draft Prototype Monitoring Plan on November 15, 1991.

The draft RMP/EIS presents seven alternatives that could direct BLM land management activities on the District's 393,600 acres of federal land and 27,800 acres of reserved mineral estate in Benton, Polk, Lincoln, Tillamook, Yemhill, Washington, Columbia, Clackamas, and Marion Counties, Oregon for the next ten years. The Preferred Alternative (PA) includes provisions for an annual sale quantity (ASQ) of 21.5 million cubic feet (136.5 million board feet (MMBF)) of timber, a 42 percent decrease from current ASQ. The final adopted RMP will replace and supersede the Westside and Eastside Salem management framework plans.

It is clear that the development of this draft RMP/EIS required a significant level of effort by BLM staff. They should be commended for addressing such a broad range of issues through a variety of management objectives for the many resources found on BLM-administered lands. EPA is pleased to see discussions regarding biodiversity and global climate change in the draft RMP/EIS. These are difficult issues to address in a programmatic document and BLM should be commended for addressing them as a part of this planning process. EPA is also pleased to see an increased emphasis on protective land use allocations such as special management areas.

However, EPA has several concerns with other aspects of the proposed action. EPA is rating this draft EIS EO-2 (Environmental Objections-insufficient information). Our environmental objections are based on the lack of sufficient development of Best Management Practices, a monitoring plan, and a cumulative watershed effects analysis

- Clarification of the need for and criteria for use of prescribed burning in rural interface areas and an expanded discussion of mitigation measures related to the District firewood program;
- Documentation of consultation activities under Section 7 of the Endangered Species Act; and
- Clarification and direction for future project environmental analyses to be tiered to the RMP.

We appreciate the opportunity to review and provide comments on this draft RMP/EIS. An explanation of the EPA rating system for draft EISs is enclosed for your reference. This rating and a summary of these comments will be published in the Federal Register. If you have any questions about our review comments please contact Sally Brough in our Environmental Review Section at (206) 553-4012.

Sincerely,

Charles E. Findley
Director, Water Division

Enclosures: Draft EIS Rating System
Review Comments
Impact Definitions
Riparian Policy

cc: D. Dean Bibles, BLM State Director
Bob Saunders, RMP/EIS Team Leader

U.S. Environmental Protection Agency (EPA)
Review Comments

Salem District, Bureau of Land Management (BLM)
Resource Management Plan (RMP)
and
Draft Environmental Impact Statement (EIS)
Oregon

December, 1992

INTRODUCTION

As noted in our transmittal letter we have several concerns about the proposed action. We have identified several issues in the draft RMP/EIS that need clarification, revision or an expanded discussion. We offer these comments in an effort to strengthen the RMP/EIS and provide the public with a clearer picture of the environmental consequences of the proposed action and the opportunities for future public involvement with site-specific projects. A detailed discussion of our concerns and recommendations for the final RMP/EIS is presented on the following pages.

WATER QUALITY

Water Quality Standards and Beneficial Uses

The Salem district has a large number of waterbodies that are water quality limited and/or have serious to moderate nonpoint source pollution (NPS) problems in four drainage basins (page 3-12). Of particular concern to EPA are:

1) Pedee, Rowell-Gold, and Quartzville Creeks which have high watershed condition index (WCI) ratings that indicate a high level of disturbance and

2) Tualatin River, Yamhill River (including the major North and South forks), Pudding River, Panther Creek, and Rickreall Creek which are water quality limited.

EPA is pleased that the draft RMP/EIS has used the *1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution* (NPS Assessment Report) to identify the waterbodies with serious NPS pollution problems and the Oregon's *1992 Water Quality Status Assessment Report* (305(b) Report) to identify waterbodies that are listed as "water quality limited" or lack beneficial use support in areas where timber

harvest and road construction is proposed in the draft RMP/EIS. A summary of our concerns about these waterbodies follows.

Pedee Creek

The overall water quality rating and stream quality conditions affecting aquatic habitat for Pedee Creek are severe (with data). The rating is based on low dissolved oxygen and low flow. The beneficial uses that are impaired are warmwater fish and other aquatic life (invertebrates etc.). The major cause for the problems is water withdrawal. The BLM WCI for Pedee Creek compares well with the Oregon's assessment. However, both direct and indirect logging impacts in this watershed could exacerbate the water quantity problem by affecting the water balance in terms of timing of release and quantity.

Quartzville Creek

Quartzville Creek has a water quality rating, aquatic habitat rating, and effects on fish rating of moderate (with data). These ratings are based on nutrient inputs and sedimentation. The impaired beneficial uses include cold and warm water fisheries, other aquatic life, municipal water supply, water recreation and esethetics. The primary reason for impaired beneficial uses is the removal of vegetation. The major watershed land use is timber management. The WCI for Quartzville Creek relates well to the Oregon Assessment ratings. However, the activity causing moderate impairment of water quality in the watershed is timber harvest. If further timber harvest occurs in this watershed, water quality would be expected to decrease. Careful consideration of sediment management in the watershed would be needed to protect further degradation of water quality.

Rowell-Gold Creek

This creek has been identified as being impaired based on recent conversations with the Department of Environmental Quality (DEQ) nonpoint staff. No information is available in the 1988 NPS Assessment Report for this stream.

Tualatin River

The Tualatin River is a water quality limited stream with a completed total maximum daily load (TMDL). The TMDL is in place for phosphorus. The assessment parameters that are exceeded include: dissolved oxygen saturation, dissolved oxygen concentration, nutrients, algae, fecal coliform and enterococcus. Nutrient levels exceed standards over much of the Tualatin River 100% of the time. Other pollution problems include sedimentation, streambank erosion and instream debris. Impaired beneficial uses are domestic and municipal water supplies. The sources of the problems are agricultural, municipal, urban runoff and high natural background inputs

(nutrients - soils). DEQ has a consistent monitoring program in place on the Tualatin River.

Because of the Water Quality Limited status of the Tualatin Basin any timber harvest plans need to be accompanied by a detailed plan for controlling NPS pollution and details on how the cumulative impacts of timber harvest may influence the Tualatin water quality when other known impacts are taken into accounted. The TMDL addresses waste load allocations (WLA) from point sources. NPS allocations (load allocations = LA's) need to be factored into the TMDL to account for planned timber harvests.

Pudding River

The Pudding River is a water quality limited river and the TMDL is nearly completed. The major assessment parameters (criteria) are dissolved oxygen saturation, nutrients, fecal coliform and enterococci. The Pudding River has high nutrient concentrations that exceed standards during the summer months. Other problems include turbidity, sedimentation, and erosion. Impaired beneficial uses are warmwater and coldwater fish, other aquatic life, and water recreation and aesthetics.

The probable causes for NPS impacts in the watershed include: landslides, surface erosion, riparian vegetation and bank disturbance, and elimination of vegetative cover (thermal protection). The current land use in the watershed includes irrigated and non-irrigated agriculture, animal waste management, nursery crops, livestock grazing, forestry, mining and urban development.

The water quality limited status of the river results from intensive agriculture and forestry uses. Any proposed timber harvest in the watershed may result in increased degradation of water quality. Logging activities need to be accompanied by a detailed plan for controlling NPS pollution. Nonpoint source allocations (load allocations - LA's) need to be incorporated into the TMDL to account for existing NPSs and future planned timber harvests.

Panther Creek and Yamhill River

Panther Creek a tributary to the North Yamhill River (both in the Yamhill drainage basin) has an overall rating of severe (by observation) for water quality, for water quality conditions affecting fish, and for water quality conditions affecting overall aquatic habitat. The major factors effecting water quality are severe sedimentation conditions. The impaired beneficial uses are domestic water supply, irrigation water, coldwater fish and other aquatic life, wildlife, water recreation and aesthetics. The probable causes for the water quality ranking for NPS problems are landslides, surface erosion, riparian vegetation and bank disturbance, flow alterations and road location.

The **Yamhill River** is water quality limited with a completed TMDL. The parameters that were elevated and resulted in the TMDL include: dissolved oxygen saturation, dissolved oxygen concentration, Ph, nutrients (esp. phosphorus), algae, fecal coliform, and enterococcus. Nutrient problems are especially critical during the summer months during low flow conditions. The Yamhill River also has NPS related problems resulting in a ranking of severe with data. The nonpoint problems include toxic pesticides, temperature exceedances, sedimentation, reduced flow, and increased plant growth (instream). The major causes for these problems are erosion, water withdrawal, wastes discharge (point source), animal waste inputs, landfill leachates and chemical use. Watershed land use patterns include: irrigated and non-irrigated agriculture, animal management, nursery/orchard, harvesting, road construction, timber management, and grazing and swimming and general construction. The major forks of the Yamhill River, the North and South Yamhill, are also rated as severe for NPS problems and are considered to be water quality limited. This should be of concern since activities resulting in water quality degredation anywhere in the basin are potential problems for the entire Yamhill watershed.

Without careful management of timber harvest in the watershed the Yamhill River could continue to show degradation in water quality. The TMDL has a strong emphasis on controlling point source pollution through WLA. The addition of inputs from logging and associated practices could result in increases in NPS pollution. Sedimentation is already a problem in the watershed.

Rickreall Creek

Rickreall Creek is considered water quality limited by DEQ. The NPS ratings are moderate by observation. The ratings are based on turbidity, low dissolved oxygen, sedimentation, streambank erosion, and low flow. The impaired beneficial uses include: municipal water supply and coldwater fishery. Causes for the problems include; water withdrawal and reservoir storage and release and recent fires. Land uses within the watershed are agriculture, range, and urban runoff. Though forestry was not listed as one of the major land uses, increased logging will require best management practices to avoid increasing the water quality problems.

BLM Activities in Water Quality Limited Watersheds

Timber harvest and road construction in these watersheds may be implemented without exceeding the water quality standards (WQS) or causing beneficial use impairment. However, the primary methods for preventing standards impairment are not developed sufficiently in the draft RMP/EIS.

The draft RMP/EIS states that

> ...Water quality limited streams would not be adversely affected by BLM management activities under any of the alternatives. Changes in water quality from BLM management activities would not exceed state water quality criteria (page 4-10).

However, of the 27 analytical watersheds in the planning area, 18 are projected to decline in overall watershed condition (page 4-11) with the Preferred Alternative (PA). Further, the future WOI shows that two water quality limited streams, Rickreall and Pedee Creeks, would be adversely effected by the PA. Out of the 18 watersheds showing a decline in watershed condition, six will decline to a significant degree. The six watersheds and the percent of the watershed administered by BLM include: Rickreall Creek - 32.6 percent, Table Rock Fork - 60.3 percent, Clear Creek (Kichis) - 47.3 percent, Kichis Frontal - 30.3 percent, North Fork Siletz- 40.1 percent, and Mill Creek - 5.8 percent. The information appears to contradict the quote from above. The final RMP/EIS needs to explain how it concludes that water quality standards (WQS) would not be exceeded and water quality limited streams would not be degraded further. Our concern is increased by the fact that BLM administers a significant percentage of five out of the six watersheds that will decline to a significant degree.

The basis for our environmental objections is that timber harvest and road construction may occur without an adequate cumulative watershed effects (CWE) analysis of site-specific projects and that timber harvest deferrals may not occur in already degraded watersheds in response to these analyses. EPA is also concerned that water quality monitoring plans are not sufficiently developed to verify that Best Management Practices (BMP) are effectively preventing adverse water quality impacts.

A CWE analysis process should be developed for inclusion in the final RMP/EIS (see following paragraphs). Since implementation of BMPs represents the major form of mitigation the final RMP/EIS needs to discuss how effective the BMPs have been in the past. Judicial reviews of the National Environmental Policy Act (NEPA) cases have supported not only the need for identifying mitigation measures, but for discussing mitigation measure effectiveness as well.

Federal Consistency, Clean Water Act, Section 319

The federal consistency provisions of Section 319 provide an opportunity for state and federal agencies to coordinate their activities and cooperate in achieving state water quality goals.

The draft RMP/EIS appropriately utilizes the NPS Assessment Report to identify existing water quality conditions on the Salem District and compare them to those

estimated by the WOI, a BLM cumulative effects analysis. We support this use of the NPS Assessment Report. However, additional uses of the NPS Assessment Report should be developed for the final RMP/EIS. The NPS Assessment Report, in conjunction with the 305(b) Report and other data, should be used in the final RMP/EIS to establish:

1. Desired future condition on a stream-by-stream basis from which RMP accomplishments can be measured.
2. Criteria and priorities for cumulative effects analyses.
3. Priorities for water quality monitoring programs.
4. Criteria and priorities for watershed activity level plans.
5. Priorities for watershed rehabilitation programs.
6. Best management practices and thresholds and decision criteria for watershed harvest deferrals.

Watershed Cumulative Effects

RMP Implementation

The draft RMP/EIS discusses potential cumulative water quality impacts. However, EPA is concerned that the draft RMP/EIS does not specifically describe the nature of future CWE analysis to be conducted for site-specific projects during RMP implementation. Until the WOI is validated and peer reviewed, it cannot be used with confidence for site-specific projects. Road construction and timber harvest may need to be deferred pending the outcome of cumulative watershed effects analyses for site-specific projects. Any CWE analysis used for site specific projects should be scrutinized to the same extent as the WOI and also be subject to the scientific process. To be meaningful, CWE analyses also need to be considered and watershed protection measures implemented by all major land owners in a watershed.

The Eugene District draft RMP/EIS contains a BMP directing that where "... cumulative effects analysis predicts degradation beyond District thresholds, defer all timber sale units in any watershed until substantial recovery has taken place." (Appendix 2-2). EPA supports this direction and recommends it for inclusion in the final RMP/EIS for the Salem District. This draft RMP/EIS states that activities may be deferred (page 2-7) but a deferral commitment was not found in the BMP appendix.

Additional Information

The final RMP/EIS should include the following:

1. A description of the CWE analysis that will be used for future site-specific projects during RMP implementation. The extent of analysis validation

should also be described. If not, a schedule for completing such validation should be included.

2. A BMP outlining specific parameters applicable to project-specific CWE analysis, such as water quality monitoring results, equivalent clearcut area, road density, or beneficial use impairment identified in the NPS Assessment Report and the 305(b) Report.
3. A BMP outlining a more conservative site-specific project planning approach when CWE analysis tools are not available, are under development, or have not been validated. When adequate tools and monitoring data are not available to predict future water quality impacts, timber harvest and road construction activities should be reduced to provide for an extra margin of safety and water quality protection.
4. A description of how CWE activities will be coordinated among adjacent landowners through such things as annual meetings to coordinate road construction and timber harvest plans and/or cooperative agreements and land management objectives regarding desired future conditions for water quality, riparian zone protection, and activity deferrals.
5. A BMP with a commitment to activity deferrals when the CWE analyses identify probable beneficial use impairment.

Water Quality Monitoring Plan

Concerns

A monitoring plan with water quality elements was included in the draft RMP/EIS. A detailed monitoring plan is critical for successful long-term implementation of BMPs and protection of water quality and beneficial uses. While BMPs are intended to protect water quality, they must be monitored to verify their effectiveness.

The monitoring plan should be complete and well organized with carefully chosen sampling parameters and sampling sites. Coordination with other local, state, and federal agencies is important to avoid duplication and to foster efficient use of limited resources. Sampling priorities should be consistent with problem areas identified in the NPS Assessment and 305(b) Reports and other data.

An important component of RMP implementation is the commitment to conduct monitoring. Increasing demands for resources can result in decreased monitoring efforts. EPA believes that timber sale volumes and associated programs should be reduced proportionately if annual funding is not sufficient to support monitoring. EPA would like to see criteria outlined in the final RMP/EIS that clarify how this commitment will be met during RMP implementation.

Additional Information

Additional Information

The final RMP/EIS monitoring plan should include written standards for sampling design, monitoring parameters, analytical techniques, statistical methods, reporting units, location of sampling, indicator species, budget, and procedures for using data or results in plan implementation; and availability of results to interested and effected groups. The monitoring plan should also have a clear feedback mechanism which enables the use of monitoring results to adjust standards and guidelines, BMPs, standard operating procedures, monitoring intensity, and project implementation (including timber sale administration) at first detection of adverse effects. Provision of such an adjustment process will ensure that BMPs and management strategies will improve in the future and that unforeseen adverse effects are identified and minimized. Lastly, the monitoring plan should include validation of the WOI and any other cumulative effects model or index intended for predicting the water quality effects of site-specific projects.

Helpful resources for the development of water quality and biological monitoring plans are:

Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska, EPA/910/9-91-001, May 1991.

Rapid Bioassessment Protocols For Use in Streams and Rivers, EPA/444/4-89-001, May 1989.

The monitoring plan may also be improved with the addition of:

- Identification of a measurable desired future condition (DFC) for each stream or subwatershed which adequately protects the beneficial uses. The DFC can be expressed in terms that best describe the beneficial use (e.g. percent fish habitat capability). DFCs are needed to ensure that future water quality accomplishments are measurable.
- On-site inspection to monitor BMP implementation by appropriate specialists as well as timber sale contract administration. Site review may be randomized (e.g., random number table).
- Riparian Management Area (RMA) monitoring to assess long-term large organic debris contribution to stream systems in such terms as quantity, size, species, and delivery rate.
- A fisheries monitoring protocol based on identification of sensitive populations and habitat types and prioritized/stratified by stressors and resource risks.
- A research/monitoring program to determine the effects of spatial and temporal segregation of harvests on sediment and hydrology.

In July 1991 Oregon adopted narrative biocriteria as part of its WQS. The state is in the process of developing the implementation guidance for the biocriteria and is selecting appropriate reference sites in various ecoregions in the state. Once this framework is in place, the BLM should coordinate its monitoring locations and protocols to allow comparison with the reference site conditions. This is necessary in order to determine whether the WQS for protection of biological integrity of the waters are being met. Provisions for this coordination should be spelled out in the EIS. In addition the state expects to adopt numeric biocriteria in 3-5 years. The BLM activities will be expected to meet these WQS once they are adopted.

Riparian Zone Protection

Concerns

Since the draft RMP/EIS provides inadequate protection for RMAs in first and second order (headwater intermittent and perennial) streams, WQS may not be met and beneficial uses may not be protected. The final RMP/EIS needs to include full protection of first and second order streams.

These first and second order streams are important in maintaining downstream system integrity and water quality as well as providing fisheries and amphibian habitat/refugia. Disturbed first and second order streams may become sediment sources to downstream areas. In addition, loss of woody vegetation along these headwater streams may eventually lead to reduced large organic debris in downstream reaches. EPA agrees with the Medford draft RMP/EIS statement that the greatest opportunity for improving stream conditions through RMA prescriptions is on first, second, and third order streams.

EPA has a number of concerns regarding first and second order streams. First, the largest percentage of riparian vegetation removal is along first and second order streams. Most of BLM's lands are along these headwater streams. Our concerns are heightened by the fact that "about 42 percent of the riparian zones are in minimal condition... and ...riparian habitat in smaller streams has a higher percentage of acres in minimal condition" (page 3-35).

Second, RMA widths are too narrow and could be weakened through road and yarding corridor development. Under the PA, timber harvest could occur in riparian zones for road construction, yarding, or habitat improvement; however, the draft RMP/EIS does not outline under what conditions these activities could take place. The Roseburg draft RMP/EIS states that "RMAs of less than approximately 85 feet are considered inadequate for proper riparian function, and RMAs smaller than 150 feet are considered to be functioning less than optimally." (page 4-42).

Third, the draft RMP/EIS relegates first and second order streams to a lower level of protection than higher orders. This is inconsistent with the Oregon WQS and with EPA's regional Riparian Area Management Policy. A copy of this Policy is enclosed for your information.

Additional Information

Tree diameter was selected as a measure of riparian zone health. The final RMP/EISs should indicate how diameter thresholds were selected. Tree species and density data should also be provided. In addition, factors that may limit future riparian zone maintenance and production, such as water table alteration should be described. These parameters should be incorporated into the riparian component of the WCI. To best assess management effects, the riparian index should be sensitive to species, diameter, density, and environmental modifiers/stressors. Since the draft RMP/EIS determines RMA age and size based on the Timber Operations Inventory for adjoining upslope trees, the final RMP/EISs should address the inventory's accuracy in predicting RMA parameters.

In addition, the final RMP/EIS should clarify how the average widths shown for RMAs will be utilized in on-the-ground analysis. Specifically, the final RMP/EIS should identify how site-specific riparian resource management would be documented and consistently implemented. The draft document states in a number of places that riparian zone widths would be determined by on-the-ground characteristics. In addition, "first and second order streams would have RMAs designated if perennial or if the beneficial uses warrant." (page 2-5). EPA recommends that the final RMP/EIS include both the documentation and the mechanisms to fully protect all beneficial uses for riparian areas, including wetlands and first and second order headwater, intermittent, and perennial streams.

Watershed Condition Index

The WCI is a reasonable method for comparing watershed effects among the RMP/EIS alternatives, although future refinements could improve its effectiveness. It is one of the most complex approaches EPA has reviewed for evaluating watershed effects in a programmatic land management plan.

EPA's greatest concern is that the WCI should not be considered a substitute for evaluating cumulative effects on a project-by-project basis during RMP implementation. In addition, it may be inappropriate to compare the index among different watersheds. The large spatial scale of the analytical watersheds used in applying the WCI could mask significant resource degradation.

Due to the way in which the WCI is applied, it is essential that it be validated. Until then it should only be very cautiously used as a resource in important project level decisions.

Additional Information

The WCI does not provide an adequate assessment of synergistic and/or cumulative effects for site-specific projects. It appears to be quite subjective and may produce variable results. The final RMP/EIS should provide greater explanation regarding WCI assumptions as well as selection of index constants. In addition, several index factors may distort actual resource impacts.

The major missing component is a way of characterizing uncertainty in the estimates. This requires a methodology for making and evaluating field measurements and assessing uncertainty. Standard methodologies for propagating uncertainty are Monte Carlo methods, Latin hypercube methods, and first-order uncertainty. Monte Carlo methods are becoming common in risk and uncertainty analyses; references abound in the environmental literature (e.g., Smith and Freeze, 1979). Latin hypercube methods are a subset of Monte Carlo methods (Iman and Shortencarier, 1984), and first-order uncertainty methods are described in Benjamin and Cornell (1970). These methods all require data with which to evaluate the uncertainty in independent variables (the components of each index).

References

Benjamin, J.R., and C.A. Cornell, *Probability Statistics and Decisions for Civil Engineers*, McGraw-Hill, New York, 1970.

Iman, R.L., and M. Shortencarier, *A Fortran 77 program and user's guide for the generation of latin hypercube and random samples for use with computer models*, Rep. NUREG/CR-3624, SAND83-2365, prepared for U.S. Nuclear Regulatory Commission by Sandia National Laboratory, Albuquerque, N.M., 1984.

Smith, L., and R.A. Freeze, *Stochastic analysis of steady state ground-water flow in a bounded domain, 2. Two-dimensional simulations*, Water Resources Research, 15(6), 1543-1559, 1979.

Best Management Practices

The achievement of WQSs for NPS activities occurs through the implementation of BMPs designed to achieve WQSs. WQSs are the means by which BMP effectiveness is measured. While BMPs are intended to protect water quality, they must be monitored to verify their effectiveness. If found ineffective, the BMPs must be

revised. Therefore, the final RMP/EIS should not rely solely on the application of BMPs to satisfy the Clean Water Act. Since the use of BMPs does not guarantee compliance with WQS, the final RMP/EIS should discuss the effectiveness of BMPs with illustrations of specific project examples and/or monitoring results. For example, the final RMP/EIS could discuss the degree of risk of BMP failure as well as any history of BMP success as illustrated via effectiveness monitoring in similar project areas.

Fisheries

Concerns

The Salem District manages land in drainages where 33 of the American Fisheries Society stocks of concern are naturally spawning and rearing. The draft RMP/EIS states that salmonid species at risk or of special concern would improve under various treatment alternatives. For example, on page xvi, BLM "...management is expected to contribute to an overall long-term (200 year) 86 percent increase in potential production of coho salmon and an 81 percent increase in steelhead in streams affected by habitat on BLM administered lands." However, watershed conditions are expected to decline in 18 of the draft RMP/EIS's 27 analytical watersheds. The draft document admits that 40 percent of coho salmon habitat and 26 percent of chinook salmon habitat is in minimal condition and that "[F]ull recovery is not expected for 200 years." (page 3-39). In addition, the Methodology for Assessing Effects on Fish Habitat and Populations in Appendix 4-9 assumes that streams are fully seeded and have an adequate number of adult fish under both short and long term population estimates (Appendix 4-36). The mechanisms by which resource increases would occur are not provided. To manage and conserve the fisheries resource, landscape level planning is required.

We are concerned that fish production potential was tied in part to the installation of fish habitat improvement (e.g., instream structures) and hatchery stocking programs. Beschta et al. (1991) determined that the restoration of vegetation adapted to riparian environments and the natural succession of riparian plant communities is necessary to recreate sustainable salmonid habitat and should be the focal point for fish habitat improvement programs. They further state that because of frequent negative effects, structural alterations to stream channels should generally be eliminated as a fish improvement strategy. Studies have not shown a relationship between stream improvement projects and salmonid population. Therefore, fish production should not be related to capital investment in "stream improvement" projects. Hatchery fish may negatively affect native fishes through genetic modification, increased intra and inter-specific competition, and altered migration patterns and timing. Rather than provide short-term solutions to habitat degradation, landscape level planning should be undertaken to reduce further habitat degradation

and implement district-wide restoration strategies (e.g., restoration of off-channel habitat).

Retention of riparian areas along third order and greater streams and the placement of instream structures will not lead to anticipated population increases. The fish habitat assessment assumes that riparian tree size and fish production are directly related. However, acute and chronic stressors such as upstream sediment inputs may continue to degrade fish habitat. Impacts such as sedimentation persist and accumulate in downstream, low-gradient habitats over periods of decades or even centuries. In addition, migratory species may be limited by habitat utilized at a single life history stage.

Additional Information

The Salem District is responsible for the maintenance of sensitive species habitat and the restoration and sustainable management of the resource. To address these issues, EPA supports development of coordinated activity management plans. The final RMP/EIS should provide greater detail regarding plan coordination and implementation mechanisms.

In addition, chronic system stressors, such as unstable slopes, landslides, roads, and mining activities that may further degrade systems prior to recovery are not addressed. For example, the draft RMP/EIS indicates that debris torrents and landslides have effected channel integrity. The final RMP/EIS should indicate whether these inputs are ongoing and whether further logging would occur in the same geomorphic setting. The final RMP/EIS must address both past and future management scenarios to adequately assess long-term enhancement of anadromous fish streams. It should provide greater information on specific mechanisms of habitat recovery and aquatic species augmentation.

The Fisheries Productivity Rating System needs further explanation. Detail should be provided regarding the related factors analysis, rating system assumptions, and level of baseline data collection. For example, temperature data should include time of collection, stream order, location of maximum, minimum, and average temperatures. In addition, clarification should be provided regarding the statement "several streams were excluded (in the evaluation) because the current potential was low."

The draft RMP/EIS lists several fish species of concern. However, information and documentation (e.g., genetic integrity, diversity) regarding these species are absent. The final RMP/EIS should include:

(a) a comprehensive biological survey;

(b) identification of watersheds supporting productive or valuable remnant populations or communities of native fishes, amphibians, and other aquatic biota; and

(c) delineation of a well-distributed network of least disturbed watersheds for conservation of biotic diversity.

Adequate fisheries information is needed to realistically evaluate management alternatives. For example, depressed or declining populations may be unusually sensitive to habitat alteration and degradation. Final RMP/EIS coverage of fisheries resources should be comparable to that provided for terrestrial species. Sensitive and priority habitats should be identified.

Recovery and restoration plans should be developed based on a watershed analysis, NPS Assessment, and 305(b) Reports. In addition, fish habitat and sediment yield should be utilized to establish/predict habitat quality. The final RMP/EIS should include a table summarizing those sub-watersheds where a timber harvest emphasis would occur. Treatments that may further induce population declines should be avoided.

Frissell (1992) states that preliminary analysis of spawner count data available from the Oregon Department of Fish and Wildlife for the period 1985-1990 suggests that watersheds having a high proportion of their drainage basins within roadless areas support a disproportionately large percentage of southwest Oregon's remaining viable wild salmon stocks and much of its important chinook salmon fishery. In addition, recent research indicates that chum salmon are perhaps the most sensitive to logging impacts of the anadromous salmonids. Restoration plans should include identification and preservation of potential refugia. In addition, management treatments should be based on the location of sensitive species and current watershed conditions.

References

Beschta, R.L., W.S. Platts, and B. Kaufmann. 1991. Field review of fish habitat improvement projects in the Grande Ronde and John Day River Basins of Eastern Oregon.

Frissell, C.A. 1992. Water quality, fisheries, and aquatic biodiversity under two alternative forest management scenarios for the west-side federal lands of Washington, Oregon, and Northern California. A report prepared for The Wilderness Society.

Harr, R.D., B.A. Coffin, and T.W. Cundy. 1989. Effects of timber harvesting on rain-on-snow runoff in the transient snow zone of the Washington Cascades. Interim Final Report for the Timber, Fish, Wildlife Program. Pacific Northwest Research Station, Seattle, Washington.

Nehlsen, W., J. E. Williams, and J. A. Lichatowich. 1991. Pacific salmon at the crossroads: stocks at risk from California, Oregon, Idaho, and Washington. Fisheries, Vol. 16 No.2 pp.-4-23.

Sedell, J.R., G.H. Reeves, F.R. Heuar, J.A. Stanford, and C.P. Hawkins. 1990. Role of refugia in recovery from disturbances: modern fragmented and disconnected river systems. Environmental Management Vol. 14, No. 5, pp. 711-724.

Drinking Water

The draft RMP/EIS states that the agency's goal is to provide treatable water at the point of intake from its watersheds to public water systems serving local municipalities. In addition, coordinated watershed plans would be prepared for community water systems where a significant portion of the watershed is administered by BLM.

This goal should be restated. The goal of watershed management in watersheds providing surface water to public systems serving municipalities, is to assure the needs of the users are addressed and to protect comprehensive water quality. Public water systems must meet increasingly stringent public health criteria required by drinking water regulations. A drinking water treatment cost strategy that protects the public health and is economically and environmentally sound is a necessary component of a watershed plan. The interests and concerns of watershed managers, water system owners/operators, and the drinking water consumers must also be incorporated into a water management plan. Consequently, watershed plans will be prepared in conjunction with and for community water systems where BLM administers a significant portion of the watershed.

An important consideration in some BLM districts, would be mining. If mining activities on BLM lands cause significant increases in the concentrations of metals in streams that supply public water systems, this could force these systems to install expensive treatment systems to remove these metals. This is a possibility which should be explored thoroughly in the final RMP/EISs for districts with significant mining activity.

AIR QUALITY

The air quality analysis is based primarily on compliance with the Oregon State Smoke Management Plan (OSMP) and the State Implementation Plan (SIP). Blanket statements regarding compliance with applicable plans and regulations do not inform the public or decision makers of actual anticipated air quality impacts. A broad screening level quantitative assessment of air quality impacts is needed to illustrate that burning can be done in compliance with applicable plans and regulations.

Sensitive Air Quality Areas

The draft RMP/EIS (page 3-6) states that "the Oregon Smoke Management Plan (OSMP), a part of the SIP, identifies strategies for minimizing the impacts of smoke from prescribed burning on the densely populated, designated, nonattainment, and smoke sensitive areas within western Oregon." The text needs to discuss in greater detail and define what is meant by the terms nonattainment, designation, and smoke sensitive. The regulatory significance of these terms should be disclosed in detail in the final RMP/EIS.

Map 5 in the draft RMP/EIS shows the sensitive air quality areas in western Oregon. The map and the discussion in the final RMP/EIS could be improved if each of the sensitive air quality areas were labeled. The text should identify the sensitive areas that are most likely to be effected by the future site-specific activities in the Salem District. This discussion should also clearly describe why each area has been designated and the significance of each designation.

Regulatory Requirements

The final RMP/EIS should provide a description of all applicable regulatory and/or permit requirements. The Clean Air Act and SIPs require that prescribed burning not cause or contribute to violations of National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increments. In addition, burning may not cause visibility impairment in federally-designated Class I areas. The air quality discussion must demonstrate that the proposed action will not cause or contribute to any violations of the NAAQS, that it will not cause air quality to degrade by more than any applicable Class I or Class II PSD increments, and it will not cause or contribute to visibility impairment.

Oregon Smoke Management Plan

The draft RMP/EIS indicates that all prescribed burning activities will comply with the OSMP. The final RMP/EIS needs to fully describe what the OSMP is, what it allows, what it prohibits, and what is protected. The final RMP/EIS should discuss how effective it has been, since its implementation in 1972, in reducing air quality effects. Any monitoring that has been completed to document the effectiveness of the OSMP should be described. Although most problem burns or intrusions can be attributed to unpredicted shifts in meteorological conditions compliance with the OSMP could still result in intrusions. For example, drift smoke from a prescribed burn can be carried by night time drainage winds into designated areas. The final RMP/EIS should discuss whether the OSMP contains provisions to prevent or minimize these types of scenarios.

The air quality discussion in the final RMP/EIS should also discuss whether different permissible burning conditions exist for different subareas within western Oregon and more specifically within the district. Different burning conditions could affect the amount of allowable burning activity under the OSMP and SIP. This in turn would affect the kinds of site preparation that could be considered at the site-specific stage. Any potential burning restraints of this type need to be discussed and fully disclosed in the final RMP/EIS.

State Implementation Plan

The final RMP/EIS should also describe the SIP and its provisions for prescribed burning. The relationship of the SIP and OSMP should be clearly presented. Any restrictions that the SIP could impose on prescribed burning, separate from the OSMP, should be discussed.

The draft RMP/EIS states that "prescribed fire smoke emissions will not be a factor in meeting air quality standards for PM10 in western Oregon." The final document needs to provide the basis for this statement. How do the predicted tons of biomass consumption compare to emissions of regulated air pollutants? More importantly, how do the predicted tons of emissions compare to the amount of particulates from prescribed burning that are assumed in the current SIP calculations.

Prescribed Burning

The draft RMP/EIS presents a breakdown of the kinds of burns included in prescribed burning activities. Table 4-1 shows the biomass consumption by alternative as well as the tons of consumption by burn type. Based on our review of the six draft RMP/EISs a number of types of burns are identified: underburn, pile burn, broadcast burn, ecosystem burn, and other burn. The air quality discussion in the final RMP/EIS should be expanded to fully describe these types of burns, explain the burn characteristics, and present the purpose of each type of burn. For example, is ecosystem burning the same as or similar to underburning? Which types of burns are hot and which types are cooler. The temperature of the fires has an effect on smoke dispersion characteristics.

Another concern with the type of burn is the increased amount of underburning. EPA understands that underburning is used to reduce undesirable fuel loads without damaging desirable residual vegetation. Due to the cooler burn temperatures with underburning, combustion is incomplete which results in greater particulate emissions. The final RMP/EIS should discuss how the emission estimates for each type of burn are calculated. How will the proposed increase in underburning (increased particulates) affect the present consumption rate and the emission reduction since the baseline period was established.

We are concerned about the effects of smoke from underburning on nearby residents and visibility. Typically underburning involves lower fire temperatures which allows the smoke to hug the ground and not attain vertical dispersion. The final RMP/EIS should provide more discussion about the human health and visibility effects from underburning. It should also focus discussion on how regulatory requirements deal with underburning. The final RMP/EIS needs to clarify whether underburning is covered by the OSMP.

Alternative burning techniques exist that can be used to reduce the impact of forestry burning on air quality. These techniques optimize fuel arrangement, fire ignition for rapid and complete combustion, and mop-up techniques. We believe that the air quality discussion would be improved by including a more expanded discussion of what practices BLM has been using and any additional techniques that could be used in the future to minimize air quality impacts associated with prescribed burning. This expanded discussion should focus on the different types of burning proposed in the RMP. More specifically, are there ways to effectively deal with the potential problems associated with cooler underburning type fires.

Finally, the draft RMP/EIS notes that "[P]articulate emissions from prescribed burning have not been shown to be a major contributor to any nonattainment area problems. Under all alternatives, air quality impacts associated with BLM administered activities are normally of very short duration and would have no short or long-term impacts on regional air quality." (page 4-7). Again, the final document needs to provide the basis for this statement. Further, this brief analysis should not be used as the basis for concluding that future site-specific prescribed burning proposals will have no effect on local sensitive air quality areas or Rural Interface Areas (RIAs). Individual prescribed burning proposals require site-specific analysis of conditions unique to the project under consideration. The fact that prescribed burning on the Salem District has a small overall effect on regional air quality has little applicability to such site-specific analyses.

Rural Interface Areas

We are concerned that the OSMP and the PA will put people in the RIA areas at risk. RIAs are defined as BLM land within 1/4 to 1/2 mile of 1 to 20-acre lot or that have residential development. Alternatives A, B, C, and Preferred will permit prescribed burns in these areas. Another related concern is that one of the primary purposes of the OSMP is to keep smoke from forestry burning activities out of densely populated areas. Compliance with the OSMP will put smoke into areas outside of large urban centers and potentially into smaller communities and individual residences in the rural environment. With underburning smoke is more likely to remain close to the ground and remain in low areas longer than would be expected with a hotter pile or broadcast burn.

Particulate concentrations that exceed human health standards have been measured up to three miles downwind of a prescribed burn. The final RMP/EIS needs to discuss human health standards and the impact of prescribed burning on people living in RIAs and other downwind communities. We believe that this is a significant issue due to the provisions of the OSMP, PA RIA policy, and the increased use of underburning.

Alternatives to Burning

The draft RMP/EIS indicates that not all timber harvest units require treatment by prescribed burning. This discussion should be expanded in the final RMP/EIS. A number of alternatives for removal of slash exist that do not involve burning. A general discussion of the types of options would provide useful information.

The draft RMP/EIS indicates that no treatment or mechanical treatment could result in a higher fuel hazard. However, logging residue can be reduced by harvesting systems directed toward maximum utilization of slash material recovery excluding the trees/fiber left for ecosystem/biodiversity purposes. We suggest that the final RMP/EIS include a goal to improve harvesting systems by provide economic incentive for increased slash utilization. Use of slash material is dependent on the capability and efficiency of the forest industry to process low grade fiber. The final RMP/EIS should provide some discussion of the economic and technological feasibility of improved slash utilization and the effect on fuel hazard.

Finally, the final RMP/EIS should address how the decision to burn or not to burn is made. Is this a market driven decision? What are the economics of forestry burning? An analysis of the cost of burning compared to the costs of mechanical removal are warranted. The decision criteria that have been used in the past should be described. More importantly the final RMP/EIS should present the criteria such as cost, silvicultural considerations, air quality considerations, market demand for low grade fiber, and ecosystem considerations that should be evaluated in the future regarding prescribed burning decisions.

Firewood Program

The draft RMP/EIS notes that "[A]lternatives to burning have helped reduce emissions." (page 3-7). One of these alternatives is a firewood program. However, the indirect effect of the BLM firewood program may contribute to reduced air quality. "Firewood sales would be permitted under all alternatives." (Appendix 4-145) Therefore, mitigation measures for the firewood program should be considered.

Firewood mitigation measures exist. EPA encourages BLM to consider incorporating the following mitigation measures in the final RMP/EIS.

The Wenatchee National Forest, Naches Ranger District **Personal Use Firewood Environmental Assessment** (EA) included several preventative mitigation measures to reduce the emission of particulates associated with woodstoves. The mitigation measures have been implemented and they include: (1) a requirement that pieces larger that eight inches in diameter must be split at least once prior to removal to facilitate drying of the wood; (2) the firewood gathering season is closed September 30 each tear to assure that firewood is not collected when wet, and some during time is available prior to burning; (3) educational and informational materials that highlight firewood gathering and burning practices that minimize effects on air quality are provided with firewood permits; and (4) a requirement to implement a cooperative arrangement with the local air quality agency on public information and education on firewood use and/or enforcement efforts on woodstove burning regulations.

IMPACT DEFINITIONS

The draft RMP/EIS uses the life of the RMP as the basis for defining short-term and long-term time frames for impact conclusion as required by the Council on Environmental Quality (CEQ) Regulations implementing the Procedural Provisions of NEPA. The draft RMP/EIS defines short-term as ten years or less and long-term as greater then ten years. However, application of a ten-year time frame is not universally appropriate for all resource categories. Our primary concern is for the biota found on BLM administered lands. A considerable range in life spans exists. Using ten years to define short-term impacts means that some populations of fish and birds, for example, could experience adverse effects for several generations. This could result in major population and community level impacts.

The definitions of short-term and long-term impact would be greatly improved if the time frame for adverse/beneficial effects was tied to the natural life spans of individual species rather than the arbitrary number that has been chosen. The Department of Interior has consistently used such an approach in the Outer Continental Shelf (OCS) lease sale EISs. These OCS lease sale EISs are not site-specific, they cover large planning areas and the activities in those areas for several years so they are analogous to a RMP/EIS. The OCS impact definitions are based partly on the length of one generation for each species or group of species evaluated. Thus, the time frame of the impact is tied biologically to the species affected. We are enclosing a copy of the OCS impact definitions for your information and consideration for the final RMP/EIS.

In the case of air quality and water quality impacts ten years is not an appropriate time frame for assessing air quality, water quality, or aquatic habitat. A ten year time frame does not comply with regulatory definitions. We suggest that the

definition for short-term water and air quality effects should be consistent with state WQS and the SIP. At a minimum short-term air and water quality impacts should exist during the course of specific activities and should be held to the shortest practicable period of time.

SPECIAL STATUS/THREATENED AND ENDANGERED SPECIES

Consultation with U.S. Fish and Wildlife Service (FWS)

Since activities conducted under the RMP could affect threatened or endangered species, the final RMP/EIS should include the Biological Assessment and the associated U.S. Fish and Wildlife Service (FWS) Biological Opinion for the following reasons:

- NEPA requires public involvement and full disclosure of all issues upon which a decision is to be made;
- The CEQ Regulations for implementing the Procedural Provisions of NEPA strongly encourage the integration of NEPA requirements with other environmental review and consultation requirements (40 CFR 1502.25); and
- The Endangered Species Act (ESA) consultation process can result in the identification of mandatory, reasonable, and prudent alternatives which can significantly affect project implementation.

The potential effects on listed species are relevant to the subsequent project-level decisions. Both the Biological Assessment and the EIS must disclose and evaluate the potential impacts of the proposed action on listed species, such as the peregrine falcon, bald eagle, northern spotted owl, marbled murrelet, and Columbian white-tailed deer. Information and related management guidance regarding the recent listing of the marbled murrelet should be added to the final document.

The final RMP/EIS and Record of Decision should not be completed prior to the completion of ESA consultation. If the consultation process is treated as a separate process and the FWS identifies necessary changes in plan implementation which have not been evaluated in the draft RMP/EIS, a supplement to the RMP/EIS could be warranted.

Coordination and Consistency

The draft RMP/EIS presents a great deal of information regarding the northern spotted owl. Since the concern and controversy regarding this species has spanned a number of years, federal agencies, and court cases, there are a number of plans and proposals that address owl populations, habitat, and management. The document should better outline how the alternatives and management direction compare to existing and draft reports and recommendations, such as the Draft Recovery Plan for the Northern Spotted Owl, FWS (1992); Final EIS on Management for the Northern Spotted Owl in the National Forests, USDA Forest Service (1992); Endangered Species Committee Record of Decision (1992); Alternatives for Management of Late-Successional Forests of the Pacific Northwest, Scientific Panel on Late-Successional Forest Ecosystems (1991); A Conservation Strategy for the Northern Spotted Owl, Interagency Scientific Committee (ISC) (1990).

For example, the final RMP/EIS should compare how the connectivity areas in the RMP compare to the 50-11-40 rule outlined in the ISC report. The draft document states that

> The ISC originally developed the 50-11-40 criteria as a standard to evaluate dispersal habitat across the landscape. This approach works well in the case of the U.S. Forest Service where there is contiguous federal land ownership. However, over much of the planning area, the BLM administers only half of the forest lands. (page 4-43)

The implication of this discussion is that the 50-11-40 criteria do not apply well to Bureau lands. However, the ISC was convened through the cooperation of three federal agencies, one of which was the BLM. Presumably, the ISC was aware of federal land ownership patterns as it formulated its recommendations. Therefore, the final RMP/EIS should clarify the similarities and differences between the RMP connectivity areas and the expected results of application of the 50-11-40 rule and the rationale for choosing one strategy over the other in the final RMP/EIS.

Finally, the final RMP/EIS should address management direction for timber sale areas exempted by the Endangered Species Committee in 1992.

Nondiscretionary Activities/Minerals

The draft RMP/EIS seems to be inappropriately delegating consultation responsibilities regarding nondiscretionary activities, such as locatable mineral exploration and development. It states that such activities "...which might jeopardize federally Listed threatened or endangered plants, may have to be resolved between the FWS and the claimants." (page 2-9). Compliance with Section 7 of the ESA is the responsibility of federal agencies, such as the BLM. While important information about

mineral exploration and development project proposals is gathered from project proponents, the coordination and resolution of consultation activities cannot be delegated to a private party, even though the nondiscretionary nature of some activities could make resolution of project activity impacts on listed species difficult.

WILD AND SCENIC RIVERS

The draft RMP/EIS recommends different numbers of wild and scenic river segments for designation under the various alternatives. Alternatives no-action alternative (NA) and A recommend no river segments, and Alternatives B and C recommend three, Alternative D recommends four, and Alternative recommends five segments. Alternative PA recommends two river segments for designation (page 2-49). These differing recommendations raise a question regarding how river segments are evaluated and recommended for wild and scenic river designation. The differences in the alternatives are in management direction and objectives; the physical qualities of each of the river segments under consideration would seem to be the same under each of the alternatives. Therefore, if a river segment is both eligible and suitable for designation, the final RMP/EIS should clarify how it is possible to recommend a given segment in one alternative and not in another.

In addition, not all streams eligible for wild and scenic river designation are studied for suitability in the draft RMP/EIS. The document notes that there will be interim management of BLM land within a half-mile corridor of these streams in order to protect their Outstandingly Remarkable Values. While the text describes some of the elements included in this interim management, such as exclusion of timber harvest in riparian areas and restriction of leasable and salable mineral development, it does not give a timeframe for the "interim." The final RMP/EIS should define the expected time during which these streams will be managed under RMP interim management direction and identify when suitability studies and possible recommendations will be made regarding these streams.

In September 1991 Oregon revised its WQS to add an antidegradation policy under 340-41-026. The policy defines what will be considered Outstanding Resource Waters (ORW) and sets forth a process for nominating and designating such waters. This process is ongoing. The language in the standards states that "The Commission may specially designate high quality waterbodies to be classified as Outstanding Resource Waters in order to protect the water quality parameters that affect ecological integrity of critical habitat or special water quality values that are vital to the unique character of those waterbodies." Priority water bodies for nomination include Wild and Scenic Rivers. With the potential listing of various salmon species as threatened or endangered, it can be expected that critical habitat for these species will be designated as ORW. Waters so designated may not have the water quality lowered

except on a short-term basis. In addition, land managers will be expected to fully participate in the development of management plans to protect those waters.

ACCESS

The draft RMP/EIS notes that easements and reciprocal right-of-way agreements provide access to 90 percent of agency lands (page 3-8). It would be helpful if the final RMP/EIS also gave an indication of how much access the BLM provides to intermingled landowners through federal license agreements, easements, and reciprocal right-of way agreements. One of the assumptions used in Chapter 4 in the comparison of the alternatives is "[d]uring the ten-year life of the plan, new roads would be constructed across BLM administered lands by private parties under the terms of existing reciprocal right-of-way agreements." (page 4-23). However, the document makes no estimate of the miles of road that might be constructed by private parties.

The document indicates that new "...timber harvest roads would be kept to the minimum necessary for management" (page xii) and that "[A]ll roads would remain open for administrative use, forest products removal, and access for mineral exploration and development." (page 2-11). Two concerns arise related to this management direction.

First, the draft RMP/EIS calls for the use of an interdisciplinary process to develop the overall transportation systems and the establishment of road management objectives. However, it does not address cooperation with other landowners. The final RMP/EIS should outline how the BLM will coordinate and cooperate with adjacent and intermingled landowners in order to plan, build, and maintain the permanent road system and accomplish road management objectives. For example, similar to the BLM's authorization for cooperative road programs, the Forest Service Road Right-of-Way Construction and Use Agreement (Cost Share) program is also based on authorization from the Federal Land Policy and Management Act of 1976. The Forest Service program includes requirements for annual meetings with road use partners in order to discuss timber management activities; road use needs; road construction plans and standards (including surfacing); and maintenance obligations. The final RMP/EIS should clarify whether the BLM road program includes similar coordination methods that assist in accomplishing road management objectives.

Second, the draft RMP/EIS mentions road closures in a number of contexts throughout the document in conjunction with various management objectives. For example, on page 2-28, the draft RMP/EIS notes that "[A]ccess management, including closure, would be applied to reflect biodiversity and multiple use needs.", and on page 2-41, the draft RMP/EIS addresses roads and recreation sites and notes that

if "...maintenance of such facilities is not adequately funded, some of them may be closed..." The term "closed" appears to be used in two ways in the draft RMP/EIS; it can mean either administratively closed (using such means as gates or other barriers) or obliterated (restored to the natural land contour and vegetation). Since both the economic costs and environmental costs of the two methods of closure may differ substantively, the final RMP/EIS should clarify which method of closure is appropriate related to specific issues and objectives. In those cases in which the road will remain on the permanent transportation system but in which road use will be restricted by an administrative closure, the final RMP/EIS should address non-traffic-generated maintenance needs that will ensure that culverts remain unobstructed and ditches are cleaned in order to prevent road "blow outs" during winter storms. In addition, the document should address road maintenance priorities that can guide decisionmaking when funding is not adequate for complete road system maintenance.

The discussion of road issues for Alternative C notes that where

> "...road construction is needed, road density would not exceed that needed if clear cut harvesting were planned. It may be preferable to use more expensive logging techniques then to build additional roads, provided the sales could be sold above the cost of sale preparation." (2-26).

This is also stated for the PA on page 2-36. Many foresters contend that partial cut and shelterwood systems often require greater road densities than clearcut systems. In addition, partial cut and shelterwood systems may have higher per unit sale preparation costs. Therefore, the final RMP/EIS should further explain how this road density objective will be achieved. For example, the document should clarify whether use of helicopters is an option for accessing and harvesting timber sales. If so, the final RMP/EIS should include a discussion of noise impacts that could be associated with helicopter use, including the noise levels that might be experienced by those who live or recreate in the vicinity. This is important because helicopters at 500 feet are comparable to sound levels of heavy trucks and city buses heard from the street. This could be significant in areas of very low ambient noise levels. One source of information on helicopter noise effects in non-urban areas is the draft and final *National Surface Water Survey - Western Wilderness Area Lakes, Environmental Assessment*, EPA 910/9-85-125 and EPA 910/9-85-126, March 1985 and April 1985. [Copies may be borrowed from the EPA, Region 10 library at (206) 553-1259.]

TIMBER MANAGEMENT AND SILVICULTURE

The final RMP/EIS should clarify the BLMs philosophy regarding the annual sale quantity (ASQ) and identify whether it considers the ASQ a goal or a mandated level of timber production. In addition, the draft RMP/EIS assumes that there will be sufficient

funding for forestry activities, such as reforestation, thinning, tree improvement, and fertilization, in support of the ASQ level (page 2-41). Since these activities contribute to the ASQ, the final document should identify silvicultural management priorities that could guide activities should they not be sufficiently funded during plan implementation. This is particularly important since estimates indicate that management costs under the PA could be 2.8 times higher than traditional costs per unit output (page 2-41) and the draft RMP/EIS assumes that reforestation under the PA will use only genetically improved reforestation stock.

The final RMP/EIS should consider timber sale economics as a management concern for analysis in response to the full public disclosure intent of NEPA and in response to the national controversy regarding below-cost timber sales. The draft notes that growth enhancing practices, such as precommercial thinning, forest fertilization, and pruning will be utilized. (page 2-10). The Appendix Sensitivity Analysis on page 4-2 indicates that both precommercial thinning and fertilization tend to have negative present net values. Therefore, the final document should provide clear descriptions of key assumptions regarding intensive management practices, interdisciplinary Team costs, sale preparation, timber pricing, product valuation, discount rates, rotation lengths, road and access costs, and road maintenance.

EPA supports the proposal in Alternative C encouraging agreements that could be "...pursued with private landowners and other land management agencies to optimize the extent and distribution of old growth restoration and retention areas while minimizing undue impact on multiple resource use." EPA would also like to encourage coordination with adjacent agencies regarding timber management practices, particularly harvest activities. For example, many public agencies and some private companies have adopted guidelines requiring regeneration on adjacent parcels to be of a certain size (e.g., trees < 1/2 feet tall) or stocking level before adjacent timber sale units may be harvested.

SOCIOECONOMIC ANALYSIS

The CEQ Regulations state that "When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment." (Section 1508.14). The proposed action will affect small timber communities in western Oregon, the entire state and the Pacific Northwest region. The draft RMP/EIS has evaluated the environmental consequences of the proposal. EPA is providing comments and suggestions on ways to improve the analysis of the social and economic effects.

The socioeconomics analysis concludes that the reductions in timber harvest associated with the PA would be expected to result in significant reductions in employment and income in the effected areas. The Klamath Falls draft RMP/EIS provides a somewhat more complete picture in that it provides an estimate of the state-wide effects of the BLM and Forest Service land management alternatives. We recommend that the final RMP/EIS for Salem District include an analysis similar to what is found in the Klameth Falls RMP/EIS. We would also recommend the analysis be expanded to include more information on other sectors of the economy.

The current analysis appears to be a static analysis; it implicitly assumes that other sectors of the economy do not change over the analysis period and thus shows the potential effects of the BLM and Forest Service activity in isolation from the rest of the economy. The analysis would be substantially more useful if BLM entered as inputs to its input-output model current forecasts of how other sectors of the Oregon economy are expected to change over the next decade. It is entirely possible that this more holistic economic analysis would show that the regional economy is likely to be employing more people over the next decade; jobs lost in the timber industry may be replaced by jobs created in other sectors of the economy.

A secondary benefit of doing the type of expanded analysis suggested above is that it might provide a picture of what types of jobs might become available in the future and what types of job training or vocational training would assist displaced timber workers in finding new long-term employment. This, in turn, would allow the final RMP/EIS to discuss and evaluate options for Federally sponsored displaced work assistance that might be used to mitigate the adverse employment impacts of the selected management plan. Although such assistance may well be outside the scope of the authority of BLM or the Forest Service, it is not outside the scope of the authority of Congress. The CEQ Regulations encourage the evaluation and consideration of alternatives not within the jurisdiction of the lead agency (1502.14(c)).

Finally, the final RMP/EISs could also be improved if the degree to which the economic activities on BLM managed lands are likely to be economically self-supporting was addressed. A quantitative analysis of each "revenue and cost" stream would allow the audience of the RMP/EIS to understand the magnitude of the subsidies involved and to determine whether continuing these subsidies would be good public policy. In addition to timber harvest revenues, this analysis should include such items as grazing fees and mineral royalties.

FUNDING

The draft RMP/EIS states that "timber sale volumes and associated programs would be reduced if annual funding is not sufficient to support the relevant actions

assumed in the plan." (page 2-41). We are concerned that the PA and alternative C will be costlier to implement since they both contain more nontraditional timber management approaches. The draft RMP/EIS indicates that for these two alternatives the costs of nontraditional timber management would be approximately 2.8 times higher per unit of timber sold than for the more traditional timber management alternatives.

The final RMP/EIS needs to describe in greater detail: how BLM funding levels are established each year; whether allocations are based solely on the amount of timber cut; whether each yearly allocation is "ear marked" for specific uses; and what effect this more costly nontraditional timber management will have on the funds available for a variety of nontimber harvest activities. Management of BLM administered lands involves a variety of activities including: data gathering, research, monitoring, cooperation with agencies for management of resident wildlife; completion of management/activity plans; maintenance of recreation facilities; and education programs. The final RMP/EIS needs to describe in greater detail how a funding shortfall will effect the variety of activities included in this plan. Will all activities be cut back equally if funding is not sufficient? Do some management activities have a higher priority for completion than others? Will all resources be equally or adequately protected if funding is less than anticipated or needed?

CONSISTENCY AND COORDINATION

While the Appendix discusses agency efforts to work with state agencies and counties on ways to make the RMP consistent with plans, policies, and programs, of other agencies, the document does not discuss what effort was made regarding National Forest Land Management Plans for adjacent Forest Service lands (Appendix I-E, page 1-25). If other federal lands are key to the success of an alternative, the final RMP/EIS should clearly outline what types of coordination and cooperation will be a part of plan implementation.

The draft RMP/EIS briefly discusses agreements that "...may be pursued with private landowners and other land management agencies to obtain an optimum distribution of old growth restoration and retention areas while the impact on timber harvest and other resource uses." (page 2-26). This presents a strong incentive for the BLM to pursue coordination, and if possible, consistency efforts with its adjacent landowners, both public and private. The final RMP/EIS should further outline and discuss the purpose, scope, and specific management activities that could be covered in such cooperative agreements.

Appendix II

TIERING AND NEPA COMPLIANCE

The CEQ regulations encourage tiering of NEPA documents.

Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (§ 1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. (40 CFR § 1502.20)

While programmatic documents, such as RMPs, provide important management direction, they do not contain sufficient site-specific detail to substitute for site-specific analysis for individual projects implemented under RMP direction. For example, in the draft RMP/EIS, under all alternatives, "...air quality impacts associated with BLM administered activities are normally of very short duration and would have no short or long-term impacts on regional air quality." (page 4-7). While the programmatic RMP partially addresses potential air quality impacts in the region, its brief analysis should not be used as the basis for concluding that future site-specific prescribed burning proposals will have no effect on local sensitive air quality areas or RIAs.

The draft RMP/EIS implies that there may be a second level of planning activity between the RMP level and the individual project level. If activity level planning is another decision-making point in BLM activity scheduling, such decisions are subject to the provisions of NEPA, as are individual project decisions, such as new land use authorizations, timber sales, land adjustments, mining activities, and consideration of silvicultural treatments (including site preparation and prescribed burning proposals).

Further, the final RMP/EIS should provide specific direction regarding the preparation of tiered NEPA documents. The draft RMP/EIS refers a number of times to future tiered EAs, but this should not be construed as a directive to prepare solely EAs for individual projects. In some cases, EISs or categorical exclusions (CE) will be more applicable. Therefore, the final RMP/EIS should identify the criteria for determining what sort of NEPA documentation will be required for future projects (EIS vs. EA vs. CE). In addition, it should provide guidance for the scope of analyses expected in these tiered documents to clarify what analyses and issues are considered completely addressed in the RMP/EIS, and what analyses and issues should be further considered based on site-specific resources and conditions.

Effect-Level Definitions

Table 5-2
Definitions Used in Effects Assessment

Effect-Level Definitions				
VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Resource Category				
Water Quality[1]				
No regulated contaminant is discharged into the water column, or some amount is discharged, but the resulting concentration of contaminant does not exceed the state or riparian State standards or EPA criterion.	A regulated contaminant is discharged into the water column and resulting concentration of contaminant exceeds but does not increase the average annual State standard or EPA criterion. Turbidity only occasionally exceeds State standards or EPA criterion. *Acute* State standards or EPA criteria are not exceeded.	A regulated contaminant is discharged into the water column and the resulting concentration of contaminant exceeds but does not increase the average annual State standard or EPA criterion. *Average* water turbidity exceeds State standards or EPA criterion. *Average* water turbidity exceeds State standards or EPA criteria, but does not exceed 7,500 ppm suspended solid concentration more than once in a 3-year period. *Acute* State standards or EPA criteria are not exceeded.	A regulated contaminant is discharged into the water column and the resulting concentration of contaminant is above the norm (usual) State standard or EPA criterion more than once in a 3-year period. Or, turbidity exceeds 7,500 ppm suspended solid concentration more than once in a 3-year period.	A regulated contaminant is discharged into the water column and the resulting concentration of contaminant is above the norm (usual) State standard or EPA criterion more than the chronic State standard or EPA criterion. Or, turbidity exceeds 7,500 ppm suspended solid concentrations more than once in a 3-year period and exceeds more than chronic State standards or EPA criteria.
Aquatic Resources				
Individuals in a population experience sublethal effects that do not change population abundance or distribution.	A population or portion of a population changes in abundance and/or distribution in a localized area and/or for a short time period.	A population or portion of a population changes in abundance and/or distribution but would recover to its former status within one generation.	A population changes in abundance and/or distribution requiring two or two generations to recover to its former status.	A population changes in abundance and/or distribution requiring three or more generations to recover to its former status.
Endangered and Threatened Species				
No discernable population decline (no sublethal effects), but a number of individuals experience sublethal effects and would recover to preactivity conditions within 1 year.	No discernable population decline (no sublethal effects), but a number of individuals experience sublethal effects and would recover to preactivity conditions within 1 to 3 years. Distribution changes in the affected area, but the decline is in a small local area and would last no longer than the project.	A population decline (sublethal effects to a low number of individuals), resulting in a minor change in the distribution and/or abundance of the species. The expected duration of the effect on the population is 1 to 3 years.	A population decline resulting in a change in the distribution and/or abundance of the species with recovery in less than two generations or 6 to 10 years.	A substantial population decline that results in a change in the distribution and/or abundance of the species with recovery in more than two generations or more than 10 years.
Economy of the North Slope Borough				
Economic effects that will not have a measurable effect on the economic well-being of the residents of the area. Total employment is increased by less than 20 persons.	Economic effects that may marginally affect the economic well-being of residents of the area. Local employment is increased by 10 to 19 persons for less than 3 years.	Economic effects that will immediately affect the economic well-being of residents of the area. Local employment is increased 10 to 19 percent for at least 3 years.	Economic effects that will significantly affect the economic well-being of residents of the area. Local employment is increased by 20 percent or more for less than 3 years.	Economic effects that will cause important and recognizable changes in the economic well-being of residents of the area. Local employment is increased by 20 persons or more for at least 5 years.

Table 5-2 (Continued)
Definitions Used in Effects Assessment

Effect-Level Definitions				
VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Resource Category				
Land Use Plans and Coastal Management Programs				
Activities generally conform with existing land use and with policies of local, State, and Federal coastal management programs and land use plans.	Activities infringe on proposed land use, or they conflict with one policy of local, State, or Federal coastal management programs and land use plans.	Activities infringe on existing land use, or they conflict with two policies of local, State or Federal coastal management programs and land use plans.	Activities alter a preferred land use, or they conflict with three policies of local, State, or Federal coastal management programs and land use plans.	Activities are incompatible and displace a preferred land use, or they conflict with four or more policies of local, State, or Federal coastal management programs and land use plans.

Source: USDOI, MMS, Alaska OCS Region.

[1] LOCAL—Changes in water quality from one or more sources, extending beyond the edge of a mixing zone (300-m radius), but affecting less than 1,000 km^2 about each discharge. REGIONAL—Changes in water quality over an area of at least 1,000 km^2 or larger about a discharge source.

[2] NMAQS are based on the protection of human health. Numerical standards for each pollutant are given in Table III-A-3. Ambient standards are supplements to the NAAQS protecting existing high air-quality areas. Regional refers to effects an area that are as large as, or larger than, about one-half the area of the North Slope of Alaska. Local refers to effects limited to less of miles near the direction. Short term refers to hours, days, or weeks; long term refers to seasons or years.

[3] Visibility criteria are applied only to PSD Class I areas; significance is determined by EPA visibility-analysis guidelines.

U.S. Environmental Protection Agency – Region 10

Riparian Area Management Policy

PURPOSE AND SCOPE

This document establishes Region 10 EPA policy on the management of riparian areas, primarily those affected by nonpoint source (NPS) activities. EPA recognizes that riparian areas serve many important functions and possess numerous values, including a major role in maintenance of the quality of the Nation's waters. The national intent of Congress to protect and improve the Nation's waters is established in the Clean Water Act[1]. Riparian areas can provide many uses, such as; recreation, forage, and timber. EPA recognizes that riparian areas can be used for these and other activities if management practices are implemented that protect or restore natural functions.

This policy will:

1) Alert local, state, and federal land managers, owners, and users to EPA's concerns in the riparian area planning and management process

2) Assist the states in Region 10 with the implementation of riparian area protection or improvement in their management programs

3) Provide guidance to Region 10 personnel in the execution of EPA's responsibilities under the National Environmental Policy Act (NEPA)[2], the Clean Air Act[3], and the Clean Water Act.

DEFINITION

Riparian areas are zones that influence and are strongly influenced by an adjacent aquatic environment. They occur as complete ecosystems or as an ecotone between aquatic and terrestrial ecosystems, but have distinct vegetation and soil characteristics because of seasonally free and unbound soil moisture. These areas are associated with rivers, lakes, reservoirs, and intermittent, or perennial streams. They may also be adjacent to springs, seeps, wetlands, and ephemeral streams.

Topographic relief and presence of depositional soils most strongly influence the extent of water regimes and associated riparian zones. Thus, the boundary of a riparian area varies from site to site and must be determined for each specific location. Some riparian areas are defined as wetlands. Others are not, because they do not possess the necessary hydrologic water regime, a predominance of hydric soils, or a prevalence of hydrophytic vegetation as described in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

Monitoring of Riparian Areas

EPA believes riparian area monitoring should be a high priority for any NPS management program. Monitoring is critical for land managers to evaluate their success in meeting their objectives for improving and protecting riparian areas and water quality. When monitoring results indicate violations or other problems, adjustments can be made in the practices implemented on the riparian area and the entire watershed ("feedback loop"). EPA will actively promote environmental monitoring at a level consistent with the condition of the riparian area and the sensitivity of the designated water uses.

Public Education and Involvement in Riparian Areas

EPA will use reviews of Section 319 grant proposals, NEPA documents, program and project plans, conferences, prepared presentations, information exchanges, and distribution of written materials to increase the awareness of and responsibility for healthy riparian areas. EPA will also encourage and support efforts that directly involve people in local activities to protect, improve, and restore healthy riparian areas. The goal of these actions is to have a motivated, educated public who understand the value of and critical need for healthy riparian areas.

Site-Specific Prescriptions

EPA will encourage and support innovative solutions to site specific problems in riparian management.

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements Definitions and Follow-Up Actions*

Environmental Impact of the Action

LO - - Lack of Objections

The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate

EPA believes the draft EIS adequately sets forth the environmental aspect(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have a full public review at a draft stage. EPA does not believe that the draft EIS adequately meets the requirements of the National Environmental Policy Act and/or Section 309 review, and that should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

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RESOLUTION NO. R-9293-03

A RESOLUTION IN SUPPORT OF CONTINUED MANAGEMENT OF O & C TIMBERLANDS

Whereas, the Bureau of Land Management has requested public input on its ten-year land and resource management plan, and

Whereas, the health, peace and safety of the people of Douglas County are affected by the alternative selected by the BLM for the management of O & C timberlands, and

Whereas, the natural resources provided through aggressive management of federal lands under the O & C Sustained Yield Act of 1937 has contributed to social and economic stability in 18 Western Oregon counties, including Douglas County, and

Whereas, the counties have invested more than one billion dollars to fund intensive forest management on these lands with the explicit expectation of an ongoing return on this investment, and

Whereas, O & C lands continue to provide a reliable employment base for many Oregon communities, and

Whereas O & C lands also provide diverse and sustainable habitat for fish and wildlife, clean air and water, and outdoor recreation opportunities, and

Whereas, these lands should continue to provide economic stability, healthy and productive forests and reliable employment base,

Therefore, be it resolved that the City of Drain supports the continued management of these lands in accordance with the O & C Sustained Yield Act of 1937 to provide a stable and predictable level of timber harvest for Oregon communities while considering other resource values, and

Be it resolved that we support the principles of multiple use for these O & C lands which include management for timber, water, recreation and wildlife, and

Be it further resolved that we encourage legislation that would enact a balance management plan into law by the Congress of the United States of America and remove management decision from the federal court system.

Passed by the City Council, of the City of Drain, Douglas County, Oregon this 14th day of December, 1992.

Wes Anderson, Council Pres.

ATTEST:

Bill Ewing, City Admin.
City of Drain
P.O. Box 158
Drain, OR 97435

X-027

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EUGENE (GENE) D. TIMMS
HARNEY, LAKE, MALHEUR,
KLAMATH COUNTIES
DISTRICT 30

REPLY TO ADDRESS INDICATED:
☐ Senate Chamber
State Capitol 97310-1347
☑ 1945 N Court
Burns, Oregon 97720

OREGON STATE SENATE
SALEM, OREGON
97310-1347

December 22, 1992

D. Dean Bibles, State Director
Bureau of Land Management
PO Box 2965
Portland, Oregon 97208

Dear Mr. Bibles,

I feel compelled to register my concerns with the Preferred Alternatives outlined in the Resource Management Plan and Environmental Impact Statement which will result in a ten-year plan for the BLM lands.

As is noted by BLM staff, the Preferred Alternatives will have a negative impact on key Oregon industries such as timber and agriculture.

I do not understand how we have come to this predicament. BLM lands have been used for decades as multiple use lands that provide a base for economic activity. It now appears there is another agenda that would take productive lands and set them off for recreation, etc. Where was the public input that led to the Preferred Alternatives. Can they be altered at this time? Have you considered the key industries, the County governments and the regional public in your decisions?

It would constitute a serious set back of our economy if these plans were to go from draft to final with little change. I request that this train be stopped dead and the public be called in as a partner to assure realistic uses of the public BLM lands. Please change the timetable for consideration of public comment, and work much closer with the public in reaching conclusions such as Preferred Alternatives.

Sincerely,

Gene Timms
Senate Republican Leader

United States Department of Agriculture
Forest Service
Pacific Northwest Region
P.O. Box 3623
Portland, OR 97208-3623
333 S.W. First Avenue
Portland, OR 97204

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Reply To: 1920

Date: December 21, 1992

Mr. D. Dean Bibles
State Director
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

Dear Mr. Bibles:

I appreciate the opportunity to review and comment on the six draft Resource Management Plans/Environmental Impact Statements you recently sent out for public comment. I have attempted to coordinate and consolidate the reviews of the documents done by Forest Supervisors and by this office; the enclosed papers and letters constitute my response to the draft documents.

Overall, I am impressed with the depth and thoughtfulness of the draft plans; your staff and all those involved are to be commended. However, I do have some concerns about how the draft Resource Management Plans deal with the northern spotted owl. The draft Resource Management Plans propose to adopt a different approach for management of the northern spotted owl than either the ISC strategy or the draft Recovery Plan. Because of this we expect to have to compensate with a new alternative in our Supplement to the FEIS on management for the northern spotted owl.

I believe either the ISC strategy or the draft Recovery Plan provides a common basis for cooperation in meeting spotted owl recovery needs and achieving our agency land management goals and objectives. As you develop your final plans, I recommend that we work together to develop plans that will be compatible with the Recovery Plan developed by the Fish and Wildlife Service, and thus avoid differences or impacts between our agencies that could result in less than optimum results for both spotted owl recovery and effective management of public lands.

Sincerely,

JOHN E. LOWE
Regional Forester

Enclosure

ENCLOSURE

COMMENTS FROM THE U.S.D.A. FOREST SERVICE, REGION 6
ON THE BLM BUREAU OF LAND MANAGEMENT
WESTERN OREGON DRAFT RESOURCE MANAGEMENT PLANS
AND ENVIRONMENTAL IMPACT STATEMENTS

December 21, 1992

Contents:

Caring For the Land and Serving People
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(Hr. ada) CC-910 Gen 933

1

1. Northern Spotted Owl

Commendations:

The BLM should be commended for the major shift toward a more multiple-use management emphasis.

We wish to thank those BLM employees who helped us with information during our review. In every case, that assistance helped us understand more of the protection being offered to the spotted owl.

We appreciate and commend BLM for their continued support and conduct of spotted owl-related research, both within the BLM and cooperatively with others including the Forest Service.

Background:

In January 1992 the Forest Service completed a Final Environmental Impact Statement (FEIS) with a preferred alternative to manage according to the ISC Strategy. The FEIS contained a spotted owl viability assessment for each of the five alternatives analyzed. A primary element of that assessment was the assumption that the BLM would "...manage their lands with a level of spotted owl protection similar to that of the ISC Strategy" (FEIS 344-40). The Supplement to the EIS now being prepared will use a viability assessment based upon the assumption that the BLM will manage according to the Preferred Alternative in the Draft Resource Management Plans (RMPs). As a result, a modification of the Preferred Alternative will likely be necessary.

We have compared the Preferred Alternatives for the Draft RMP's with the ISC Strategy. Relative to the ISC Strategy, the Draft RMPs:

* Results in 62,000, or 8 percent, fewer acres of owl habitat at year 10 and 71,000 fewer acres at year 80. Similarly, there is a 4-percent reduction in old-growth after 10 years, a 6-percent reduction in old growth after 100 years, and a 6-percent reduction in "blocks" of habitat in 10 years;

* Do not protect home-range size areas (Category III HCAs) for all currently known and future pairs of spotted owls in the Oregon Coast Range Area of Concern;

* Do not adopt the 50-11-40 rule but instead describe management that will delay, for 40-80 years, the development of forest stand conditions which meet the dispersal standards set forth in the ISC Strategy. This results in 385 fewer quarter townships meeting the 50-11-40 rule at years 30-40, and;

* Schedule timber harvest on 143,000 acres within HCAs. The scenario put forth for the silvicultural creation of suitable habitat for the northern spotted owl over a number of decades is presented as if the outcome is certain. Some acknowledgement of the risk should be included. It is uncertain whether biologists can adequately describe owl habitat, whether prescriptions can be written to achieve that habitat, whether such prescriptions can be successfully implemented, whether monitoring will be designed and implemented that will measure success of the implementation,

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and whether monitoring will result in appropriate adjustments to treatments.

Viability Rating and Mitigation:

It appears that these differences will affect the viability of the northern spotted owl on the National Forests. The ISC "...concluded that the owl is imperiled over significant portions of its range..." and "...in some portions of the owl's range, few options for managing habitat remain open..." (ISC page 1). The ISC also reported that "The situation for dispersal habitat on BLM lands is not good and getting rapidly worse. We consider the BLM lands to the weak link in the proposed strategy..." (Q&As on A Conservation Strategy...., question #66.) Thus, because of the breakup of normal dispersion patterns and the resultant risk of isolation of the coast range, substantial corrective actions in order to ensure long-term viability on National Forests may be required. If so, mitigation would likely focus on increasing the size of HCAs on the Siuslaw National Forest and at critical links between physiographic provinces to increase the future population of spotted owls in order to increase probabilities of successful movement of owls among physiographic provinces.

Recommendation:

The Forest Service and BLM are currently working on EIS's that include management strategies for the northern spotted owl. We recommend (1) that the BLM adopt a strategy for managing the northern spotted owl which is consistent with the ISC Strategy and/or the Recovery Plan, and (2) that strategy be incorporated into the Resource Management Plans.

2. NEPA-Related Comments

Since all of the RMP's/EIS's are similar, comments apply to all of the documents.

A. Documents seem to be well written, easy to understand, and have all of the parts mandated by the CEQ regulations for implementing NEPA (40 CFR 1500-1508). They also make good use of maps, charts, graphs, and pictures.

B. Documents are set up to make a wide variety of decisions, much the way the Forest Service did during the first round of Forest Plan development. With a purpose and need of providing a "... comprehensive framework for allocating and managing the natural resources in the area within the principles of multiple use and sustained resource yield" (Klamath Falls Resource Area RMP and EIS), the BLM is forced to look at a broad list of issues and a broad range of alternatives. Had they been able to build on previous planning efforts and narrow the scope of this analysis to the "things that need changing," they may have had a much less cumbersome planning process.

C. The documents never spell out clearly what decisions will be made as a result of this analysis. At a glance, it appears that decisions are being made about management direction for a variety of resources, land allocations are to be made, areas of critical environmental concern are being selected, and possibly some recommendations are to be made regarding Wild and Scenic River suitability but a reader must really search to figure these things out.

D. The EIS's discuss effects on global climate. We have taken the approach to date that this is outside the scope of our analyses and that there is too little information available to provide a reasonable estimate of effects.

3. Timber Modeling and ASQ Calculation (Selen District Draft Resource Management Plan)

The methods used to model timber are described in Chapter 2 and Appendices 2-A to 2-D. In general these sections are well organized, clear, and concise. The methodology for estimating empirical yields, projecting future yields, and assigning timber harvest methods and silvicultural treatments for a given alternative appear logical and sound. The explanation and rationale for the genetic tree improvement program is written in terms that the general public should understand.

Appendix 2-D describes the Best Management Practices and the classification system used to identify unsuitable and restricted ground. The recommended practices for each classified area are also clearly explained. There is no table showing the acreage within each land classification, however. This table would help the reader determine the significance of these restricted areas.

The harvest scheduling and ASQ calculations for this Draft Plan are based on a premise that the Non-Declining-Yield constraint limits harvests for the first decade. Given the emerging concerns over threatened and endangered species, watershed protection, and other cumulative effects, this premise may be false. On most National Forest lands in western Oregon, the first-decade harvest acreage is most limited by the requirements to meet existing standards and guidelines. In the past few years the available timber management acreage has declined, with the removal from the base of relatively undeveloped areas (e.g., spotted owl HCA's, etc.). The areas that remain in the base are generally heavily impacted by past cutting and cannot be harvested now at their long-term sustained-yield level. On BLM lands, which are often intermingled with private ownerships, these short-term harvest limitations may be as severe.

For Alternative D only, a data base model was used to ensure that the 50-11-40 requirement for spotted owls was met. We recommend that you expand this model to include other "cumulative effect" factors which may limit your harvest level in the coming decade. This model could calculate the allowable harvest acreage for each relevant subarea of the District for the coming decade(s) and be used in conjunction with the TRIM-PLUS model. Alternatively, a short-term linear programming model (FORPLAN or SASA) could be used to determine the potential harvest acreage by subarea and type in the first few decades of the plan.

4. Forest Pest Management

A. GENERAL COMMENTS

1) We are impressed with the change in emphasis for BLM management that these Resource Management Plans initiate. In general, the plans appear to be genuine first efforts to develop something approaching a sustainable ecosystem management program. They certainly do not represent "business as usual."

2) The documents are quite well organized and obviously represent a great deal of work.

3) In our opinion, the practice of defining a program or concept at the beginning of the documents and subsequently using an acronym or only the initials of that program or concept is confusing, needlessly obscure, and extremely annoying. It would be much better to avoid these kinds of shortcuts altogether. Use of the fully spelled-out words would make the documents much more readable.

4) The documents need editing. In particular, the spelling of scientific names should be checked thoroughly. For example Phallicus, the genus of the most important forest pathogen in western Oregon, is spelled "Phillicus" several times in the Roseburg District Plan. Also, references need to be checked. Some that appear in the texts are not listed in the respective References Cited sections.

B. SPECIFIC COMMENTS RELATIVE TO VEGETATION/INSECT AND DISEASE MANAGEMENT

1) When referring to competing vegetation management, all Resource Management Plans are tiered to the BLM's 1988 EIS, Western Oregon Management of Competing Vegetation. Noxious weed references are tiered to the 1987 Supplement, and Record of Decision, to the 1986 EIS, Northwest Noxious Weed Control. This appears to be a reasonable approach, and we believe that the documents to which they are being tiered are of good quality.

2) In our opinion, none of the Resource Management Plans adequately addresses insect and disease concerns. Coverage is superficial and vague, and the plans, as written, strongly imply that insects and diseases are not important. We are particularly concerned about the following points:

a) Insects and diseases are not mentioned in any issues or concerns. Forest health is mentioned peripherally, but the insect and disease components are, for the most part, ignored. Existing conditions of insects and diseases in management areas are not addressed or are superficially addressed (with the exception of the Klamath Falls Resource Area Plan), and quantitative data (which are available) are not included. Monitoring of insect and disease effects will be impossible since there is no base line for comparison. Little or no effort is made to project effects of new management practices on future insect and disease impacts. Some of the proposed management changes will affect insect and pathogen populations profoundly.

We believe that significant insects and pathogens should receive treatment as important concerns or planning considerations under at least the "timber production practices" issue raised in all the plans. Specifically, laminated root rot and Douglas-fir beetle should receive coverage in westside District plans (where they presently receive only brief mention). Pine bark beetles, dwarf mistletoes, Armillaria root disease, and annosus root disease should be addressed in the Klamath Falls Resource Area plan. They are discussed in the draft but should be addressed in much greater detail.

b) Many of the plans refer to insects and diseases as "natural components of the ecosystem" and seem to imply that, under that reasoning, there is little need to consider their management. While it is true that insects and pathogens are natural ecosystem components, so are fires, vegetation that competes with trees, animals that consume trees, heavily stocked stands, etc. We suggest that insects and pathogens are "agents of change" that should concern the forest manager just as much as those other forces that managers traditionally attempt to influence. There certainly will be cases where active management of insects and diseases will not be desirable but, in such cases, a competent manager should know the consequences of the no-action alternative. As the plans now stand, this will not be the case.

c) The plans repeatedly indicate that control methods will be applied to insects and pathogens if large outbreaks develop. We believe this is a poor way to manage insects and diseases. The preferred method of managing populations of insects and pathogens is to use a prevention approach with the goal of never allowing epidemics to develop. Integrated pest management techniques, including silvicultural manipulation of stands to prevent the development of conditions favorable for damaging population increases, is our preferred method.

d) The plans address the need to practice very intensive forestry on areas being managed primarily for the timber production objective. Thinning, use of genetically superior planting stock, competing vegetation management, etc., are advocated as methods to increase production. Use of proper management techniques for insects and diseases should be included as important methods for reducing timber growth loss and mortality.

e) Effects of insects and diseases on management objectives other than timber production are hardly mentioned at all. At the very least, the potential impacts of insects and diseases on these objectives should be outlined and estimated.

f) These documents do not contain an accepted definition of "forest health." We consider a desired state of forest health is a condition where biotic and abiotic influences (i.e., insects,

diseases, atmospheric depoeition, fire, silvicultural treatments, harvesting practices) do not threaten ecosystem sustainability and attainment of management objectives for a given forest unit now or in the future. Other definitions exist. All the BLM plans refer to improving and promoting forest health. However, most of the plans do not indicate how the term is defined. Several of the plans suggest that various activities (such as retaining a certain number of trees following a harvest, for example) will ensure forest health. As most of the plans are now written, there is no way to judge whether such statements have any meaning. We suggest a single, coherent definition be adopted and used in all the plans.

5. Rural Interface

United States Department of Agriculture	Forest Service	RO

Reply to: BLM Draft Plans — Date: 12/14/92

Subject: Rural Interface

To: Director, Land Management Planning

The purpose of these comments is to aid in the response by the Forest Service to the Bureau of Land Management Draft Resource Management Plans for the State of Oregon.

The Bureau of Land Management Draft Plans for each of the districts in Oregon are tiered to the Medford District Draft Management Plan on the issue of Rural Interface. Rural Interface is an issue that has been identified as affecting decisions of federal and state agencies in formulating land management goals. Theory from the draft management plans on Rural Interface states that if a change in the social values for an area occur, "traditional activities" will be curtailed or have a greater cost. Nationwide, there are changing social values. The overall increase in population is a key factor. This increase is coupled with a shift in the rural portions of states from those families that earned a living directly from the land to the families that choose to reside in the rural setting without a tie economically to the land base. Taken together, the social value system for rural areas has shifted.

The differences between the Forest Service and the Bureau of Land Management on the issue are reflective of the mission of the agency. Central to the Forest Service mission is the focus on the people element and the role they play in land management. Programs for the Forest Service range through the continuum of human interaction within ecosystems that begin in the urban environment and grade outward to the low level of interaction found in the wilderness. Because of these program elements, the Forest Service disagrees with the analysis on Rural Interface and the decisions in land allocations that are based on that analysis.

Analysis Methods

The analysis is based on the premise that conflict between the agency and the public is directly related to distance of management activities from residence. Potential lot size along with the distance from the property boundaries is then used to develop the degree of potential conflict to land management activities.

This is too simple to reflect the complicated interactions within the Rural Interface. As stated in the document (Ch 3-123), counties' efforts at zoning large lot size have been unsuccessful in facilitating public land management activities. Conflict still requires regardless of distance. Public involvement, type of activities, history of relationships, and timing of activities also play a role in estimating the degree of conflict.

9. Comments from the Siuslaw National Forest (Salem, Eugene and Coos Bay District Plans)

DEC 01 1992

United States Department of Agriculture	Forest Service	Siuslaw National Forest	4077 S. W. Research Way P.O. Box 1148 Corvallis, OR 97339-1148

Reply to: 1920/1950 — Date: November 25, 1992

Subject: Review of BLM Resource Management Plans by Siuslaw National Forest

To: Regional Forester

We have reviewed three of the BLM Resource Management Plans and Environmental Impact Statements--Salem, Eugene and Coos Bay Districts. This review has been coordinated among the appropriate Ranger Districts whose comments are attached.

The overall impression is there has been excellent work on developing planning procedures and describing the work in very readable NEPA documents. We are glad to see the BLM has adopted an ecosystem management objective for the Preferred Alternative and has done an admirable job of publicizing that intent.

The BLM and Forest Service are presently faced with very similar land management concerns, e.g., maintaining healthy ecosystems in the Coast Range (665 of Salem District is in the Coast Range), managing for recovery of threatened and endangered species associated with mature/old growth conifer forests, evaluating streams for Wild & Scenic River status, and improving protection of watersheds and fish resources. However, the two agencies conduct separate planning processes with different methods for classifying lands and addressing management requirements. The intermingled land ownership patterns in the Coast Range will require more coordination if we want to reach some common goals for ecosystem management.

Some of our concerns related to inconsistent approaches to management include the following:

1. There are apparent differences in how the Siuslaw NF and BLM will manage habitat for northern spotted owl. The Preferred Alternative in the Salem District RMP indicates lands within Designated Conservation Areas are included in old-growth emphasis areas (OGEAs). Management of OGEAs includes long-rotation timber management (150-300 years) and thinnings for density management. The 150-11-40? guideline from the Interagency Scientific Committee report, "A Conservation Strategy for the Northern Spotted Owl", appears not to be adopted. These differences could affect our ability to meet recovery goals for the spotted owl and could conflict with expectations for access across adjacent FS land.

2. The Salem District lands in General Forest Management Areas (GFMA) would be managed primarily for timber production with traditional methods of 70-100 year rotations, 40-acre harvest units, reforestation with genetically improved seedlings when available, fertilization of all suitable stands, prescribed fire for site preparation, and, when needed, herbicide to provide planting spaces and reduce competing vegetation.

FS-6200-2687-6(2)

The Siuslaw NF is currently exploring new ways of managing timber lands to be more responsive to ecosystem management objectives. We strongly support the BLM proposal to manage the SFMA for landscape level diversity and to plan to leave some large, live trees in harvest areas. We would encourage BLM to explore additional ways to manage the forest lands for diversity and to address ways to reduce fragmentation of mature/old-growth ecosystems.

3. The BLM appears to be using different assumptions than the Siuslaw NF used for estimating effects of alternatives on fish habitat quality and resulting fish numbers. Information provided in Chapter 4 of the Salem District EIS shows there are no expected differences in habitat quality between alternatives (excluding Alternatives NA and A), although the alternatives are designed with varying widths of Riparian Management Areas (RMA) along streams. This gives the impression that the BLM assumes larger RMA widths, with the potential to provide greater quantities of large woody debris for stream structure, are not expected to provide greater benefits to stream condition. This approach differs from our current understanding of fish habitat management.

More specific comments related to the Coos Bay and Eugene Districts are included in the attached letter from the Mapleton Ranger District. Some specific comments about the Salem District RMP are:

1. Designation of an ACEC on Marys Peak is consistent with our established Marys Peak Special Interest Area. We would encourage some coordination on potential trail developments and any recreation developments planned for Parker Creek.

2. The Corvallis-to-the-Sea trail planning effort is well underway at the Alsea Ranger District, but the Salem District EIS indicates that trail is not included in the preferred alternative (Table 2-5). We encourage BLM to reconsider that proposal.

If you have any questions about these comments, please contact Harriet Plumley (750-7079) or myself.

JAMES R. FURNISH
Acting Forest Supervisor

cc: R.Lewis, RO-PE&A

Enclosures (2)

UNITED STATES DEPARTMENT OF AGRICULTURE
Forest Service
Siuslaw National Forest
Waldport Ranger District
P. O. Box 400
Waldport, OR 97394

Reply to: 1900

Date: November 17, 1992

Subject: Salem District Resource Management Plan

To: Forest Supervisor

We have reviewed the Salem District Resource Management Plan and Environmental Impact Statement for major conflicts with our Forest Plan. In general it appears their plan would be consistent with the current Forest Plan. We recognize the Salem District is attempting to take an ecosystem approach for managing their lands. It appears the Salem District is utilizing different biological parameters, models and assumptions then our agency and the Fish and Wildlife service when it comes to analyzing the effects of their alternative on listed species. By not recognizing the differences in approach between agencies two concerns are raised for us.

The first concern relates to access across NFS lands. Upon implementation, BLM will have expectations to utilize or develop access across lands we manage. Since they would be following different parameters, it is possible their proposals for access may be inconsistent with the Final Environmental Impact Statement on Management for the Northern Spotted Owl in the National Forests.

We are also concerned that by following different conservation efforts on listed species our ability to plan and implement conservation/recovery efforts will continue to be delayed. The best example is the effects of the "God Squad" findings have had on both planned sales and acceptance of the EIS for management of the northern spotted owl.

I believe their final EIS should recognize that adjacent land management agencies are following different strategies for managing listed species.

CONRY J. FRISCH
District Ranger

Caring for the Land and Serving People

FS-6300-38/7-681

784

United States Department of the Interior

BUREAU OF MINES

WESTERN FIELD OPERATIONS CENTER
EAST 360 3RD AVENUE
SPOKANE, WASHINGTON 99202-1413

January 4, 1993

Memorandum

To: District Manager, Bureau of Land Management, Salem District Office, Salem, Oregon

From: Chief, Branch of Engineering and Economic Analysis

Subject: Comments on the Salem District Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS)

The Bureau of Mines is very concerned over the definition used to designate mineral potential in this RMP/EIS. In footnote 1 of Table 3-37 (p. 3-78), the low potential definition automatically includes all "areas where there is insufficient information to make a determination of the mineral potential." We feel this assumption is unsupported by any geologic evidence and is a grave error which would unjustly exclude potential mineralized areas from future examination simply because there has been no previous discovery or exploration.

The number of mineral commodities identified within the Salem District and listed on page 3-76 of the document suggests there are a wide variety of mineral deposit types in the area and therefore good potential for future mineral development. Lack of recent local mineral activity is a poor criteria for the conclusion that no minerals are present. The cyclic nature of the mining industry, heavily depressed mineral prices, and environmental regulations have severely restricted mineral exploration and development presently. As a result mineral activity is somewhat curtailed.

We believe it is critical that as much land as possible remain available for future exploration and possible development. Closures to mineral entry must be carefully considered. This includes not only closure of the land on which the deposit is located but also sites of critical access routes into potentially mineralized areas.

In light of the rarity of economically attractive mineral locations and the inconsequential impacts of mining, considering successful reclamation techniques used today, multiple land use concepts demand consideration of mining activities above other resources in almost every instance.

John R. Norberg

X-043

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DELNA JONES
WASHINGTON COUNTY
DISTRICT 6

REPLY TO ADDRESS INDICATED:
☐ Home of Record/Salem
Phone: (503) 378-1347
Salem
☐ P.O. Box 2965
Aloha, OR 97006
642-2455

HOUSE OF REPRESENTATIVES
SALEM, OREGON
97310-1347

COMMITTEES
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Member
Economic Community Affairs
Trade & Economic Development
Veterans' Affairs
Consumer & Consumer Affairs
Education
Environment & Energy

December 21, 1992

D. Dean Bibles
State Director
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

RE: Draft Resource Management Plan & Environmental Impact Statement

Dear Mr. Bibles:

I appreciate the opportunity to comment on your draft plan; however, I am skeptical of the impact public input will have on this draft.

As I look at the Preferred Alternative in the various BLM areas I see a continuation of the loss of the public lands use that will deter the economic welfare of Oregon and the nation. Certainly, it should be clear today that the government cannot afford to spend deficit tax dollars to maintain set asides while removing productive lands for recreational purposes. However, it is clear from the draft plan that the BLM is doing just that. How were the Preferred Alternatives arrived at? Was the public involved? In Oregon, the Preferred Alternatives will eliminate thousands of timber related jobs, limit mining activities, restrict grazing and off road vehicle access and lock away rivers.

I would like to see a great deal more public involvement in this planning process. I would like to see these decisions driven by public opinion in the part of Oregon that will be harmed by the decisions. The current approach appears to meet an agenda from out of the region or out of state. These public lands have been depended upon for a major portion of the Oregon economic base. This ten year plan will have a major impact on our state's economy and deserves a thorough public study, inspection of data, and consideration of the opinion of those closest to the resource.

Sincerely,

Delna Jones
State Representative
District 6

BARBARA ROBERTS
GOVERNOR

OFFICE OF THE GOVERNOR
STATE CAPITOL
SALEM, OREGON 97310-0370
TELEPHONE: (503) 378-3111

December 18, 1992

Mr. Van Manning, District Manager
Bureau of Land Management
1717 Fabry Road, S. E.
Salem, OR 97306

Dear Van:

Enclosed you will find the State of Oregon's Final Coordinated Response to the Salem District's draft Resource Management Plan and Environmental Impact Statement. We have also attached copies of six position papers, state agencies' final comments and the Oregon State University Report. This response represents the State's final review of concerns that eleven state agencies, the public and interest groups, and Oregon State University have expressed to us over the last several months on BLM's draft plans.

I encourage your District staff to feel free to contact the Governor's Forest Planning Team to gain a full understanding of specific concerns and recommendations that we have outlined in our response.

I thank you and your staff for the field trips and discussions afforded the Governor's Forest Planning Team over the last year. We look forward to continuing this cooperation with your District. If you have any question about the State's final response, don't hesitate to call.

Sincerely,

Anne Squier

Anne Squier
Senior Policy Advisor for
Natural Resources

THE STATE OF OREGON'S FINAL COORDINATED RESPONSE

TO THE

BUREAU OF LAND MANAGEMENT'S

DRAFT RESOURCE MANAGEMENT PLANS

AND

DRAFT ENVIRONMENTAL IMPACT STATEMENTS

Governor's Forest Planning Team

December 1992

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The Governor's Forest Planning Team has completed the Final Coordinated Response to the Bureau of Land Management's draft management plans for the Eugene, Salem, Medford, Coos Bay, Roseburg Districts, and the Klamath Falls Resource Area. Preparation of this coordinated response is part of Governor Roberts' commitment to be aggressively involved in federal forest planning and working within the spirit of cooperation outlined in the Memorandum of Understanding signed between the State, Bureau of Land Management (BLM) and the United States Forest Service.

Key issues addressed in the State's Final Coordinated Response to the six BLM plans are summarized in the following sections.

Ecosystem Management. The State endorses BLM's overall ecosystem management approach by using biological diversity to manage their lands. While biological diversity will require long-term experimentation, research and intensive evaluation and monitoring, the State believes it will create over time a more ecologically sustainable, productive, healthy, and resilient natural ecosystem. The State believes that people and communities are key elements that must be considered when implementing ecosystem management.

Land Use. Land use conflicts between BLM and rural interface residents have increased over the years. The State recommends that BLM become more active in local land use planning. This means BLM should actively participate in Oregon's statewide land use planning program by coordinating its efforts with various state agencies and local governments.

Fish and Watershed Management. The State supports BLM's strategy to manage and monitor by analytical watersheds. Water quality and quantity, fish and wildlife habitat, and wetlands should be enhanced, maintained if in good condition and restored where conditions have been identified as declining. Sensitive fish stocks must be protected on BLM-administered lands. BLM should protect riparian areas and monitor conditions over time. Cooperation between landowners is essential within multiple ownership watersheds to achieve the desired conditions.

Air Quality. BLM plans should more specifically address how the proposed increase in use of prescribed burning will meet state and federal air quality standards. Continued cooperation between the State and BLM regarding air quality is encouraged.

Tourism and Recreation. The State recommends that BLM expand recreational opportunities on its lands. This would include increasing/expanding developed recreation sites, increasing dispersed recreational opportunities, building additional trails, and protecting scenic quality along state/federal highways and Wild and Scenic Rivers.

Timber Management. While the State supports BLM's new biological diversity emphasis, we question predicted harvest levels anticipated from various land allocations. In particular, growth and yield assumptions may not meet the timber volume expected from lands within the timber base. Increased dependence upon intensive management practices to produce the predicted allowable sales quantities must be accompanied by stable funds for implementation and monitoring. Forest health should be more adequately addressed in the final plans.

Wildlife Management. BLM needs to more explicitly explain how they intend to improve habitat (cover, forage and road management) for deer and elk. BLM should further protect other wildlife, especially sensitive, threatened and endangered species. The State supports the creation of older stand conditions through improved silvicultural practices. The State urges BLM to comply with the Final Recovery Plan for the Northern Spotted Owl and continue consultation with the U.S. Fish and Wildlife Service to reach consensus on the best way to provide for the recovery of the northern spotted owl and other threatened and endangered species.

Old Growth. BLM districts are proposing various techniques to maintain/produce older-aged forests. The State supports BLM's overall approach to maintain and protect old growth stands through biological diversity. Old growth-dependent species must also be protected when harvesting old growth in the general forest land allocation through landscape diversity and accelerating older forest conditions on adjacent BLM lands.

Livestock Management. The State recommends that BLM develop detailed allotment management plans for every grazing allotment, of concern is livestock's impact on fish and wildlife habitat, big game, and riparian-dependent species. The State encourages range improvement projects to increase forage and water developments which should help draw livestock away from riparian areas.

Minerals and Energy. BLM should acknowledge and preserve access to state-owned mineral rights. BLM should further recognize the value of mineral and energy resources when making land management decisions.

Socio-economic. BLM's draft plans have not sufficiently addressed the social and economic implications of their preferred alternatives on Oregonians. BLM needs to more specifically address local impacts of district plans on community stability, concentrating on the social impacts. Job multipliers should be further evaluated. Monitoring of the socio-economic conditions created by implementation of the preferred alternatives needs to be addressed.

Road Management. The State recommends that each BLM district develop a comprehensive road management plan. The plans would be used to manage access which in turn would improve wildlife habitat, water quality, and recreational opportunities.

Special Plant and Tree Species. BLM should expand its inventory of sensitive plants and implement standards for protection including monitoring. BLM should aggressively follow the interim management plan for managing Pacific yew.

Tribal Concerns. Lands administered by many BLM districts were used by Native Americans and contain historically significant cultural and spiritual sites. The State believes BLM should identify, during project planning, these sites and protect them during implementation of management activities.

Standards and Monitoring. The implementation of biological diversity by BLM will mandate a comprehensive monitoring program, including a dedicated funding source. This is critical in determining whether the expected future conditions are being accomplished. Specific, measurable standards must be a component of the total monitoring package. The State recommends that BLM strengthen its standards and monitoring program in the final plans.

Budgets. Adequate funding is essential for implementation and monitoring of BLM's biological diversity strategy. Dedicated funds for expanded intensive management programs being proposed are needed. The State believes that BLM budgets should not be necessarily linked to allowable sale quantity levels.

Detailed State Final Coordinated Response. Questions regarding the State of Oregon's Final Coordinated Response should be directed to: Governor's Forest Planning Team, 155 Cottage Street, Salem OR 97310, Phone: (503) 378-8127

STATE OF OREGON'S FINAL COORDINATED RESPONSE TO BUREAU OF LAND MANAGEMENT DRAFT RESOURCE MANAGEMENT PLANS AND DRAFT ENVIRONMENTAL IMPACT STATEMENTS

I. INTRODUCTION

The Bureau of Land Management administers 2.5 million acres of land in western Oregon including parts of Klamath County. In total, this accounts for approximately half percent of the forest land base in western Oregon. Fish and wildlife, domestic water, timber, recreation, grazing, and minerals are just some of the many values found on these lands. Revenues from managing BLM resources contribute millions of dollars each year to Oregon counties for schools and roads. The importance of BLM lands to the people of Oregon cannot be over-esphasized.

Recognizing a need to coordinate State responses to federal resource management plans, the Governor's Forest Planning Team was created in 1987. This team, which includes representatives from twelve state agencies, has worked together over the last five years to develop coordinated responses to major federal land management planning documents.

Most recently, the Governor's Forest Planning Team has worked closely with five BLM districts (Medford, Salem, Roseburg, Coos Bay and Eugene), one Resource Area (Klamath Falls) and the State Office in Portland in an effort to better understand BLM's planning process. The State also conducted six "open houses" scattered throughout the state to solicit input on BLM's draft plans. Comments received from the public, and agency review of the State's Proposed Coordinated Response have also been considered. Input from the public, state agencies, and Oregon State University form the basis for the State's final response.

The following document is the State of Oregon's Final Coordinated Response to the six draft Resource Management Plans (RMPs) and Environmental Impact Statements (EISs). The State's final response represents a consolidated response to the six draft RMPs and EISs and includes comments appropriate to specific issues by districts/resource area. Individual state agency comments and Oregon State University's Report have been attached for review.

We appreciate the cooperation that BLM districts, the Klamath Falls Resource Area and the State Office have given the State Team in understanding the planning process. This kind of working relationship strengthens the ability of the State and BLM to develop resource management plans acceptable to Oregonians and the Nation.

II. MAJOR ISSUES

A. Ecosystem Management. How will BLM implement ecosystem management that responds to creating sustainable, productive, and healthy ecosystems while still producing goods and services?

B. Land Use. How can BLM better address problems encountered in managing rural interface areas? Has BLM met the federal consistency requirements of the National Coastal Zone Management Act and Oregon's Coastal Zone Management Program? Has land tenure been adequately addressed? How has State ownership or surface/subsurface ownership rights been handled?

C. Fish and Watershed Management. How will BLM use analytical watersheds to measure cumulative effects of management activities? How will riparian areas and wetlands be protected? How will fish habitat be protected and enhanced?

D. Air Quality. How should BLM address the use of prescribed fire as a forest management tool in terms of the potential impacts on air quality?

E. Tourism and Recreation. How should BLM manage for recreation, visual resources, and Wild and Scenic Rivers?

F. Timber Management. Are BLM's timber growth and yield assumptions valid? How will silvicultural practices be used to support projected harvest levels? Will BLM be able to produce the harvest levels predicted by land allocations? Has BLM adequately addressed forest health?

G. Wildlife Management. How should BLM districts manage for big game habitat? What snag levels should BLM provide for cavity-dependent birds and other wildlife? How should sensitive, threatened and endangered wildlife species be managed?

H. Old Growth and Mature Forest. How will BLM manage its forests to maintain old growth and mature forest composition?

I. Livestock Management. How will BLM manage its grazing lands to produce forage for livestock and wildlife while protecting other resource values, in particular riparian areas?

J. Minerals and Energy. How should BLM recognize and manage its mineral and energy resources?

K. Socio-Economic. How will the adopted plans affect economic opportunities in surrounding communities? What impact will the plans have on socio-economic stability in the planning area and statewide?

L. Road Management. How should districts/resource areas manage their road networks to promote compatibility with resource uses?

M. Special Plant and Tree Species. How should BLM protect special status plant and tree species?

N. Tribal Concerns. How should BLM districts protect traditional Tribal cultural and spiritual sites?

O. Standards and Monitoring. Does BLM have measurable standards and a comprehensive, aggressive monitoring program to determine whether plans are meeting short and long-term expected future conditions?

P. Budgets. What budget will BLM districts need to carry out the preferred alternative? How should the districts react if a smaller budget allocation occurs?

--DISCUSSION OF MAJOR ISSUES--

A. Ecosystem Management. How will BLM implement ecosystem management that responds to creating sustainable, productive, and healthy ecosystems while still producing goods and services?

1. Concepts and Principles

Managing lands and resources based on ecological principles has been emerging as a new view in scientific literature, research, and in public policy. This view is seen as being not only biologically sound, but also more attuned to public expectations and values of doing a better job at managing our natural resources. It makes sense for programs and organizations to work under a systems concept which includes people, animals, soils, plants, water, climate, with the processes of nature working together as a whole.

The concepts presented in this section and in the State's paper, titled, Ecosystem: A Coordinated State Response To BLM's Resource Management Plans (Appendix 1), were derived from literature searches, field trips, and discussions with researchers and land managers on defining principles and implementation strategies for ecosystem management.

The State believes that the guiding principle of ecosystem management is to create a more ecologically sustainable, productive, healthy, and resilient natural ecosystem. How to meet this objective is a complex issue land managers must face. One thing is certain, however, a change is needed on how we have traditionally managed our resource lands. We believe that change may be achieved through the careful application of ecosystem management.

The Revested Oregon and California Railroad Grant Act (O&C Act) and the Federal Land Policy and Management Act are the two major pieces of legislation that govern the management of BLM lands in Oregon. Within these laws, ecological principles define management constraints, management approaches, and predictions of those ecosystem responses necessary to ensure proper maintenance of sustainable systems. People will continue to play a major role in this ever-changing ecological system.

Another law which has influenced management on not only BLM lands but other federal, private and state lands is the Endangered Species Act. This Act requires the protection and recovery of species determined to be endangered or threatened, regardless of other legal mandates.

2. Goals of Ecosystem Management

The State's comments on BLM's biodiversity strategy are based on the following five objectives:

a. Maintenance and restoration of biological diversity at four levels of organization: geographic scale, genetic composition, communities and ecosystems.

b. Sustainability of components and processes of ecosystems over time and long-term productivity and resiliency of such ecosystems.

c. Contribution to the basic needs of people and communities who depend on the land for subsistence, livelihood, and social and spiritual development.

d. Consideration of sensitive ecosystems such as wetlands, riparian zones, and fragile sites.

e. Provide consistent linkage between forest health and ecosystem management.

f. Intensively monitor and evaluate implementation of biological diversity to determine if short-term goals are leading to long-term expected future conditions.

3. Consistency with Legal Mandates and Authority

BLM manages 84 percent of its land in western Oregon/Klamath Falls Resource Area under the Revested Oregon and California Railroad Grant Act (O&C lands) and Coos Bay Wagon Road (CBWR) lands. The remaining 16 percent are referred to as Public Domain lands managed under the direct authority of the Federal Land Policy and Management Act (FLPMA). The O&C/CBWR and Public Domain lands have different legal mandates on how they should be managed. BLM has stated in its preliminary planning documents that it would make planning decisions consistent with these laws.

While it is conceivable that, with the requirements of the Clean Water Act, the Clean Air Act, and the Endangered Species Act, Public Domain and O&C/CBWR lands could be managed similarly; it is not obvious that they should be so managed. The mandates are different; the management approaches to protect and enhance may be different; and, the beneficiaries of these approaches are different.

BLM draft plans have not explained the rationale on how their biological diversity-based preferred alternatives are consistent with its legal mandate for O&C/CBWR lands. The relationship

between the preferred alternatives' ecosystem management concepts and existing laws governing the management of OGC/CBWR lands need to be clearly articulated in each final plan.

4. State's Recommendations

Biological diversity principles used by BLM in developing their draft plans represent a holistic approach to managing resource lands. We commend BLM on this effort.

The State's comments on biological diversity, found in the draft plans, are based on principles found in our position paper (Appendix 1). These principles are described below.

a. **Expected Future Condition.** BLM RMPs should identify and examine the expected future condition for biological diversity. Expected future condition goals should relate to the compositional, structural, and functional attributes of ecosystems and should include a regional perspective. BLM districts need to express in greater detail what the expected future conditions will be from implementing the preferred alternatives.

b. **Prescriptions.** RMPs should include specific, measurable prescriptions or standards which when implemented would work toward meeting the expected future condition. While prescriptions are part of each draft plan, it is not clear how they will meet the biological diversity short- and long-term goals.

c. **Ecosystem Condition.** RMPs should provide information on the current condition of ecosystems and their compositional, structural, and functional attributes to establish "baseline conditions." Plans need to identify areas of concentrated biological diversity and ecosystems (e.g., old growth) at high risk due to human activities. "Baseline conditions" should be used to monitor trends in biological diversity over time and to make necessary adjustments in plans. Standards and monitoring plans for evaluating whether they are being met need strengthening.

d. **Research and Adaptive Management.** The RMPs should detail how BLM plans to integrate management, monitoring, and research to continually apply adaptive management and improve the scientific basis for ecosystem management. This has not been sufficiently addressed in the draft plans.

e. **Ecosystem Monitoring.** RMPs should include specific monitoring questions for measuring whether management prescriptions are meeting the expected future conditions. For example, is forest age class distribution within a certain forest allocation moving toward or away from the expected future condition? BLM plans should integrate management, monitoring, and research to continually apply adaptive management and improve the scientific basis for ecosystem management. BLM districts need to develop more comprehensive, monitoring plans to measure the long-term commitment of ecosystem management.

f. **Ecosystem Dependency.** BLM operates under laws and regulations which require production of goods and services of all types. People are part of, and are dependent on, BLM-managed ecosystems. BLM plans should describe the linkage and dependency (social, economic, cultural) of local and regional communities, groups, industries, etc., on ecosystems within each land allocation.

g. **Threatened and Endangered Species.** RMPs should reflect the special consideration BLM is providing for ecosystems that contain endangered, threatened, and sensitive species. This includes meeting the requirements of various recovery plans, as well as ecosystem management provisions for preventing species from being listed. Special emphasis should be placed on the recovery requirements of the spotted owl and provisions for anadromous fish. BLM has developed no strategy for meeting the requirements of the Endangered Species Act for the spotted owl and other species. Whether this strategy is sufficient to meet the upcoming legal mandates is unknown at this time.

h. **Silvicultural Practices.** BLM plans should identify the silvicultural practices and the cause-and-effect relationships which will lead to the goals of biodiversity/ecosystem management. This includes guidelines for: timber harvest and road management, achieving species diversity, retention and restoration of old growth and other successional stages, vegetation manipulation, vegetative control, stand conversion, artificial regeneration and genetic improvements, hardwood management, fertilization, and prescribed fire. BLM has presented some innovative forest management approaches to managing its lands in response to protecting sensitive, endangered and threatened species plus other resource values.

i. **Coordination.** BLM should clearly specify methods for coordinating biodiversity and ecosystem management goals with adjacent forest landowners. Specifically, BLM must coordinate with the Forest Service and relevant state agencies to assure that activities to achieve regional/landscape biodiversity are compatible with plans

and activities of these agencies. BLM plans should explain in more detail how they plan to coordinate their biological diversity program with adjacent landowners and more broadly on a landscape level.

5. Summary

The State applauds BLM's biological diversity strategy as it recognizes the forest ecosystem from a holistic perspective rather than the traditional single-emphasis management. Each draft plan evaluates the important components of biological diversity and attempts to predict short- (10-year) and long-term (100-year) expected future conditions. The concern over fragmentation, due to ownership patterns and past intensive management practices, may be mitigated by the application of the Designated Conservation Areas (DCAs) grid, Old Growth Emphasis Areas, Conductivity Areas, special areas, and other allocations which promote an older forest structure. Intensive long-term monitoring will be essential to determine if BLM's biological diversity strategy is meeting expected future conditions.

Many questions remain to be answered by the scientific community and land managers on how to successfully manage lands using ecosystem management. BLM's ecosystem management approach will be very helpful in answering these questions over time.

B. Land Use. How can BLM better address problems encountered in managing rural interface areas? Was BLM set the federal consistency requirements of the National Coastal Zone Management Act and Oregon's Coastal Zone Management Program? Has land tenure been adequately addressed? How has State ownership of surface/subsurface ownership rights been handled?

1. Rural Interface

BLM has identified the management of rural interface areas as one of eleven major planning issues to be addressed by each district and the Klamath Falls Resource Area.

The term "rural interface" refers to those areas where BLM-administered lands are adjacent to or intermingled with predominately privately owned lands zoned and/or used for agricultural, forest, rural residential, and other resource and nonresource purposes.

Owing to the close proximity of BLM holdings with other lands and population growth in these areas, BLM, private and other public landowners are expected to experience increasing levels of conflict with one another over the management and use of their respective ownerships.

Taken together, the draft resource plans state that rural interface conflicts and protection of BLM lands in Oregon are becoming greater, with the most extensive problems occurring in the Medford District. One of the most visible results of this development is that wildfires over the last several years, particularly in southern Oregon, have destroyed and/or threatened increasing numbers of lives, resources and structures in rural interface areas.

Statewide, BLM has calculated there are approximately 194,000 acres of BLM land lying adjacent to private lands currently zoned to allow development on 1 to 20 acre lots.

a. BLM's Response to Rural Interface Problems

The preferred alternative in each district's draft plan conceptually treats the rural interface issue in the same manner. Each district proposes to establish a buffer area on its lands which lie adjacent to private lands zoned with minimum lot sizes ranging from 1 to 20 acres.

Within these buffer areas, BLM management activities would be altered where feasible to mitigate the concerns of nearby residents. Examples of the kinds of special management practices undertaken by BLM in the interface buffer include restrictions on public access, road building, harvesting methods and frequency, and application of herbicides and pesticides.

b. State's Recommendations

The State's review of BLM's interface strategy is based principally on a policy paper titled, Recommendations to BLM For Managing Rural Interface Areas, transmitted to BLM from Governor Roberts in December 1989 (Note Appendix I). The paper, which BLM encouraged the State to produce, formally acknowledges that the problem of rural interface areas involving BLM lands is a matter of critical State concern.

The paper calls upon BLM to enter into a special partnership with the State of Oregon so that the rural interface problem can be addressed comprehensively rather than in a fragmented, uncoordinated manner. Unlike other states, Oregon presents BLM with a unique opportunity through its recognized statewide land use program and related initiatives by the Department of Forestry and other agencies to deal with rural interface areas.

The State's paper contains six specific recommendations aimed at enabling BLM to join with state and local governments in achieving significant progress on various aspects of the interface problem, including policy development, agency coordination, information exchange, and conflict resolution.

Unfortunately, after review of the six draft RMPs/EISs, it is disappointing to note that BLM apparently rejects a proactive approach described in the State's paper for dealing with rural interface areas.

The State believes that BLM's passive strategy of relying on uniform buffering of federal lands will do little to alleviate new inappropriate developments in rural interface areas. This strategy further will severely limit BLM's opportunities to implement effective forest management programs on these interface lands.

The State urges BLM to incorporate the following recommendations, as described in the State's interface paper and the Department of Land Conservation and Development's comments to the RMPs (Appendix 2), into the final resource management plans.

(1) BLM should act consistently with Oregon laws, policies, and programs adopted to protect the State's forest land base for timber production and other forest uses.

(2) BLM should increase its participation in Oregon's statewide land use planning program. This could be accomplished through establishing State and BLM working groups to further BLM's involvement in the statewide land use program and other related State efforts to address rural interface problems.

(3) BLM's State Office should provide policy guidance to districts for addressing rural interface issues.

(4) BLM, in cooperation with the State of Oregon, should establish and apply a revised definition of rural "interface areas" which takes into account existing uses; current federal, state and local plans; and other land use factors.

(5) BLM should incorporate the rural interface issue into its agreement with the State of Oregon for monitoring the implementation of BLM management plans.

2. Federal Consistency

Four BLM districts (Salem, Coos Bay, Eugene and Roseburg) administer lands covered under the federal consistency requirement as provided in the Coastal Zone Management Act. Under the Act, any federal activity, within or outside the coastal zone that affects any land or water use or natural resources of the coastal zone must be carried out in a manner which is consistent, to the maximum extent practicable, with the enforcement policies of the State's federally approved coastal management program. The mandatory enforcement policies contained in the Oregon Coastal Management Program are:

a. The Statewide Planning Goals adopted by the Land Conservation and Development Commission;

b. Acknowledged city and county comprehensive plans and land use regulations; and

c. The statutory authorities and regulations of selected state agencies.

A preliminary analysis of a federal agency's consistency determination is made by the State following review of the draft plan or project being proposed. The final consistency determination by the State of Oregon is made following release of the final environmental impact statement on the adopted plan or project.

Based upon preliminary analysis, it appears that the draft RMPs for the four districts are consistent with Oregon's Coastal Management Program.

However, formal State concurrence with BLM's determination of consistency cannot be made at this time due to a lack of specific documentation in the RMPs which demonstrates that all of the applicable mandatory state authorities listed in the Oregon Coastal Management Program have or will be met.

For the purposes of its final federal consistency determination, BLM will need to document in the final EISs how the selected management alternative for each RMP complies with the statutory authorities and regulations of the Oregon Coastal Management Program. Until such an analysis is conducted and incorporated into the final RMPs, full concurrence by the State on BLM's consistency determination with the Oregon Coastal Management Program cannot be made. (See Department of Land Conservation and Development's comments on federal consistency -- Appendix 2.)

3. Land Tenure

BLM districts have inventoried and categorized their lands according to resource value (e.g., timber, wildlife, wetlands), land status (e.g., O&C or Public Domain) and ownership pattern (e.g., scattered or blocked). We have three concerns on how districts have addressed land tenure.

First, there seems to be no uniformity on how districts have categorized their lands. Coordination between adjacent districts is lacking and land tenure maps included in the plans are difficult to interpret. We strongly recommend districts develop common criteria and coordinate among themselves land tenure decisions to interject uniformity into the process.

Second, an In-Lieu Land selection settlement has occurred between the State and BLM within the last year. The State, according to the Courts, is allowed to select 3,202.29 acres of BLM Public Domain land. Our concern is the lack of mention of this settlement in the Land Tenure section for the preferred alternatives. We request that language be inserted which clearly states BLM's responsibility to accommodate the State's selection within the requirements of the law. (Note Division of State Lands response -- Appendix 2.)

Lastly, O&C and Coos Bay Wagon Road lands that are suitable and available for timber production should not be exchanged for unsuitable or single use lands. These lands should be retained for forest production.

4. Navigability

None of the draft plans acknowledge existing or potential State ownership claims on navigable waterways within BLM districts. Language, noted in Division of State Lands response, should be include in each final plan regarding navigability.

C. Fish and Watershed Management. How will BLM use analytical watersheds to measure cumulative effects of management activities? How will riparian areas and wetlands be protected? How will fish habitat be protected and enhanced?

One of the State's goals is to ensure that BLM restores and protects riparian-dependent and upland resources. This is consistent with BLM's direction in the Federal Land Management and Policy Act, the O&C Act and other federal and state laws. It is also consistent with BLM's long-term objective to maintain and enhance watersheds that currently are in good condition while improving those identified as declining. The comments and recommendations that follow are based on this goal.

Rivers, streams and lakes, and their riparian areas are valuable resources. Within their area of influence, they provide habitat for wildlife and fish and furnish domestic water and recreational opportunities such as boating, swimming, and fishing.

BLM's Fish and Wildlife 2000 -- A Vision For The Future has set several objectives for improving water quality and riparian area and watershed conditions in Washington and Oregon. The goal, according to this plan, is to improve nearly 656 miles of streams. Evaluation and monitoring is also emphasized as a major component of the program.

Maintaining and enhancing fishery resources, as noted in all of the draft management plans and the BLM's Fish and Wildlife 2000, is an admirable undertaking. Careful management of riparian

areas combined with manipulating harvest schedules in watersheds and instream improvements should help protect the fishery resources in Western Oregon. As a general rule, BLM should not substitute restoration, enhancement projects or mitigation for adequate protection of riparian dependent resources except when damage from essential activities is unavoidable. BLM's proposed biological diversity strategy should help to achieve the expected future conditions desired in watersheds.

1. Fish

A State goal is to restore and protect fish stocks. Declining fish stocks in the Columbia, Snake, and several southern Oregon rivers will require an unprecedented effort by resource managers to reestablish acceptable wild fish populations. This effort must include cooperation by all landowners on the management of watersheds and, in particular, riparian areas. BLM needs to be an active player in this long-term progrem.

Many studies are underway (some 270 on the Columbia River system alone) to examine the causes for declining fish runs in the Northwest. Preliminary theories on why fish runs are declining range widely from dam construction to deteriorsting conditions of our watersheds. Many believe it is a combination of many factors, all interrelated, which have led to the problem.

The types of fish habitat enhancement projects over the next decade are generally not enumerated or described in the draft plans.

Fishery concerns which BLM can influence in their land management decision process include: watershed management (including riparian area protection), forest management practices, and grazing.

Sensitive Fish Species

Several of the listed sensitive fish stocks, which have been noted by the Oregon Department of Fish and Wildlife (ODFW) as occurring on the various BLM-administered planning areas include: chinook salmon (Lower Columbia River and South Coast fall run stocks), chum salmon, coastal cutthroat trout (anadromous Columbia River basin stock), coho salmon (Lower Columbia River and South Coast stocks), Oregon chub, Jenny Creek sucker, redband trout, Lost River and Short-nosed sucker just to name a few.

Of particular concern is declines in fish production in the Illinois River. Winter steelhead are of special concern as this stock has been petitioned for threatened or endangered status under the Endangered Species Act. The basin's fall chinook salmon and coho populations have also declined.

BLM has surveyed its lands and has concluded that aquatic habitat on some of its lands is not in good condition. These conditions will seriously influence BLM's ability to improve habitat for sensitive fish stocks occurring on their lands.

The State recommends that BLM conduct a survey to identify declining fish populations and develop recovery plans for high risk populations. BLM should take aggressive action to improve sensitive fish habitat working closely with the State, other federal agencies, Tribes, and the general public. BLM should describe more completely how their preferred alternatives will impact sensitive fish stocks, and what steps would be taken to mitigate adverse impacts.

2. Water Quality and Quantity

a. Water Quality

A State goal is to ensure that BLM meets or exceeds state and federal water quality standards. The draft BLM plans have stated that they meet federal and state water quality standards; however, several districts have identified streams that do not currently meet these standards. Best Management Practices (BMPs) have been included in each RMP plan which present general prescriptions for meeting water quality.

The State believes that the BMPs listed in the draft plans contain few measurable standards and varied widely between districts. Furthermore, standards are neither clear or specific enough to be used in monitoring water quality. No information is provided in the plans to show how managers will make determinations regarding water quality and erosion potential for forest management activities.

Further concern has been expressed over the lack of information on landslides. Landslide prevention is a critical component to maintaining water quality on forest lands. BLM has identified fragile sites (unstable soil areas) through its Timber Production Capability Classification inventory. While we assume that the inventory included the identification of potential landslide areas, protective standards for these sites have not been clearly described in the draft plans.

We believe BLM districts have not sufficiently addressed potential landslide problems. The draft plans surprisingly lack information regarding slope stability which is needed for, among other things, the location of waste disposal sites.

The State recommends that BLM districts strengthen their commitment to water quality through the following:

3. Water Quantity

A State goal is to provide a sustainable amount of water to meet the needs of Oregonians and fish and wildlife resources.

Successive years of drought statewide have elevated concerns over the availability of water. Most BLM plans have addressed streamflows, beneficial uses, community watersheds, and BLM wells. However, additional information is needed to strengthen the discussion on water quantity.

The State makes the following recommendations:

a. The final plans should acknowledge the limits on the availability of surface water and address surface water quality problems.

b. Districts should describe watershed improvement and stream restoration activities which increase low season flow.

c. District plans should address ways to conserve and reduce water consumption and soil compaction.

d. BLM should expand their discussion concerning the availability of groundwater and groundwater quality problems.

e. Final plans should provide a more thorough discussion of the potential effects of the alternatives on water yields and streamflows. Other recommendations are outlined in Water Resources Department's response (Appendix 2).

4. Watershed Management

Oregon's Strategic Water Management Group has developed a watershed management goal for the State. This goal, in part, notes that a watershed management strategy must enhance and restore watershed ecosystems in order to optimize the natural resources of the state for all beneficial economic, environmental, and social uses.

BLM districts have divided their lands into analytical watersheds using a watershed condition index to measure current and future conditions. The State supports this strategy, in principle, as it should help BLM to achieve State objectives for water and wildlife resources on lands they administer.

Planning by analytical watersheds serves several very important functions. First, it allows district specialists the opportunity to plan management activities on a much smaller, more workable,

a. BLM needs to make BMPs more specific to assure that water resources objectives are being met. BMP language should include conditions for which BMPs are applicable. Supporting policies and documents also need to be consistent with the BMPs.

b. Consistency through coordination in implementation and monitoring are needed not only within a district but also between districts. The State recommends that BLM develop more comprehensive standards utilizing such practices as the Forest Service (Siuslaw National Forest), State Department of Forestry and others in identifying (using GIS) and protecting potential landslide areas.

c. Where streams do not meet State water quality standards for temperature, BLM should not allow activities, (e.g., grazing) which would increase temperatures over the long term.

Temporary (one-season) temperature increases would be permissible from the following activities: restoring or improving riparian areas or riparian habitat; stream bank protection; required transportation system crossings; harvest corridors necessitated within existing water to beneficial use; or other essential activities such as fire suppression, flood control, or administering BLM lands. Water temperature increases from these activities should be minimal and adequately monitored, especially for cumulative effects. Temporary disturbances should be scheduled when adverse effects to beneficial uses would be minimized.

d. BLM should evaluate future road design, construction, and maintenance standards in terms of protection of water quality. As noted in the Oregon State University response, adequate culvert sizes (consider 25 and 50 year flood) are necessary for draining runoff. Catastrophic road failures from poor road design and plugged culverts, can have a major impact on downstream channels, riparian area values and fisheries resources. The Oregon Forest Practices rules are currently being revised to consider larger culvert sizes on private lands.

The Department of Environmental quality (DEQ) has conducted intensive monitoring of water quality in several basins in western Oregon since publication of BLM's Analysis of the Management Situation. BLM is encouraged to contact DEQ for the results of these monitoring programs especially on streams running through BLM lands. (Note DEQ comments in Appendix 2.)

geographic setting. Second, districts have a better opportunity to monitor the cumulative effects of forest management activities on water quality and quantity, fish, wildlife, and recreation, plus other resources.

BLM's methodology of using an index to measure the cumulative effects of various current and future management practices within individual watersheds has merit. The condition of watersheds could be used to determine where forest management activities could or could not occur. However, the state is unclear how the key watershed condition indicator used in the plans (the watershed condition index) was generated; how it was used in management planning; how it will be used in standards, guidelines, and monitoring; and how it will be validated.

The State is concerned about predictions in the draft plans' preferred alternatives that some watershed conditions will decline over the life of the plans or even worsen from existing poor conditions. For example, the Alsea District predicts that in 18 of its 27 analytical watersheds (67 percent), conditions will either decline to a "minor" or "significant" degree over the short-term under the preferred alternative. According to BLM's Executive Summary: Western Oregon Draft Resource Management Plans/Environmental Impact Statements, 45 watersheds "probably" will have declining conditions over the next ten years under the preferred alternatives.

The State fails to understand how declining watershed conditions will meet water quality and other resource objectives set forth in the draft plans or even state and federal water quality standards. It would seem that basin-specific prescriptions to restore or enhance water quality (e.g., sediment and temperature) and aquatic habitat have not been adequately addressed.

Recommendations on watershed management and condition index that BLM districts need to consider when they develop their final plans are listed below.

a. In order to obtain more significant data from evaluation and monitoring, BLM should subdivide analytical watersheds greater than 10,000 acres into smaller, more manageable units.

b. BLM should set watershed impact standards to help guide forest management activities. Standards should address maximum soil compaction, erosion rates, equivalent clearcut area, and relative percentages of seral stages. If standards are projected to be exceeded, proposed projects within a watershed should be reevaluated. Similar adjustment would also occur if monitoring determined standards are not being met.

c. BLM should display severely impaired streams identified by DEQ's 1998 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution within analytical watersheds. This would better indicate existing on-the-ground conditions in the many subwatersheds within a single analytical watershed and provide more meaning to BLM predictions of future watershed condition.

d. Watersheds should be classified and prioritized according to current functional and ecological conditions and importance for maintaining viable wildlife populations. Watershed-specific standards should be developed, in cooperation with adjacent landowners, to restore or maintain watershed conditions. A proactive approach may be used which would include establishing riparian easements outside of sufficient width to achieve restoration on streams in poor condition. Districts should place a high priority for easement purchase on these watersheds. The State and other interest groups should be included in restoration plans. We commend the Medford District for adopting an aggressive approach to watershed/riparian area restoration by developing watershed management plans for 28 streams.

e. BLM should analyze the relationship between calculated watershed condition indices and current flow and water quality conditions. This should enable BLM to test the validity of the rating system and to improve it using environmental assessment information to validate watershed condition index values as much as possible. Additional discussion on how BLM developed and used the watershed condition index in their planning process should be included in the final plans.

f. Management activities should be monitored in each watershed to determine the cumulative effects on water, soil, fish, wildlife, and other resources. It will be difficult to accurately monitor watersheds where BLM manages only a small portion of the land base. State strongly recommends cooperation and communication between landowners in multiple ownership watersheds. Cooperative ventures should involve evaluation of watershed condition, land management planning, and watershed monitoring for protection of water supply, water quality, and fish and riparian-dependent wildlife. Monitoring of multiple ownership watersheds further would serve as a benchmark for comparison with other watersheds with greater BLM ownership.

We commend the Medford District for recognizing watersheds and riparian areas with high cumulative effects. The district has deferred some 28,000 acres from harmful activities for the next ten years because of poor watershed conditions.

a. BLM needs to define an expected future condition for their riparian management areas and provide management directed at maintaining or restoring this condition. The State recognizes that riparian systems are dynamic and change with time due to catastrophic floods, wind, and other natural ecological processes.

b. Standards should be established for all stream orders and should reflect functional and ecological differences between stream orders. At a minimum, these factors should ensure: long-term supply of large woody debris recruitment, snags, shading, water quality (temperature, turbidity), microclimate, floodplain protection, and critical habitat for wildlife and sensitive species.

c. Riparian area management needs to be addressed at the watershed or landscape level and should reflect the current conditions of watersheds.

d. Restoration of riparian areas identified in "poor" or deteriorating conditions should be a high priority.

e. Riparian areas in "good" condition should be maintained in good condition.

f. Riparian management areas (RMAs) should be an appropriate width to meet water quality standards, supply potential large woody debris (loading of complex wood structure in stream) and down wood (tons/acre in riparian management areas), and recognize and manage for sensitive riparian-dependent species within a landscape context.

Buffer widths may vary depending upon overall watershed condition, stream order, beneficial uses, ecoregion, impact to sensitive species, and physical characteristics within/adjacent to streamside area. Critical components that should be considered when developing buffer widths include, but are not limited to, overall watershed condition, shading (water temperatures), sedimentation and turbidity, nutrient recycling, large woody debris, snags, and critical habitat for wildlife and aquatic species. BLM recognized some of these important ingredients when developing their riparian area protection policies.

g. Concern has been expressed over protection of intermittent streams, mainly stream orders 1 and 2. Some have suggested (more accurate mapping is needed) that these streams may comprise as much as 79 percent of the total stream miles on BLM lands in western Oregon. The State recognizes that these smaller streams serve an important function for fish, wildlife and water quality. Greater knowledge through research on the importance of these streams to fish,

5. Riparian Area Management

Water and associated streamside vegetation supply a unique ecological function. Riparian areas have their own distinctive environment and provide habitat for many fish and wildlife species inhabiting BLM lands. Riparian areas also function as corridors between BLM's Old Growth Emphasis Areas and other anchors of biological diversity within a landscape context.

The State's goal for riparian areas is to protect, maintain and restore (where necessary) long-term aquatic productivity and the functional and ecological value of adjacent terrestrial areas directly influencing aquatic systems. This should be accomplished by establishing standards for relevant factors which affect attainment of the State goal.

BLM districts have inventoried streams within their specific administrative area. Stream miles by order, acres of riparian area (mostly order 3 and greater), miles of fish diversity, and vegetative classes have been identified and summarized in the draft EIS document. We commend BLM for this effort, as it should set the stage for programs designed to improve watershed/riparian ecosystems.

We would recognize the Klamath Falls Resource Area's commitment to produce a Watershed Management Guide (p. 4-4). While the content of this guide was not outlined in the draft plan, it could serve as an important step toward meeting the desired water quality goals. One item that we would encourage the resource area to reevaluate in their guide is the protection standards proposed around lakes which is less than other western Oregon BLM plans.

The importance of protecting riparian areas cannot be over emphasized. Several recent studies by a consortium of federal and state agencies, Tribes, and others have surfaced in response to the declining fishery resource in Oregon. Studies by COPE through Oregon State University, the Scientific Panel on Late Successional Forest Ecosystems Report to the House of Representatives, Forest Service (Upper Grande Ronde River Plan, Riparian Management Guide for the Willamette National Forest), and the State of Oregon (Draft Water Classification and Protection Project, and Anadromous Fishery Study) are just a few of the many studies recognizing the need for a greater understanding of watershed/riparian ecosystems and the fishery resource.

Considering the importance of riparian areas on BLM lands contributing to water quality, water quantity and fish and wildlife habitat, the State makes the following recommendations:

wildlife and water quality is needed. We believe that individual forest project plans should map and evaluate order 1 and 2 streams existing within the project boundary before a plan is implemented. If it is determined in pre-project planning that channel integrity or identified beneficial uses need protection, then appropriate protection (including riparian buffers) should be applied. Project planning should also evaluate the potential cumulative effects that activities could have on the beneficial uses outside (subbasin level) of the project area.

Intermittent streams should be managed according to specific standards established for large woody debris recruitment, shade, shading, water quality (temperature, turbidity), microclimate, and critical habitat for wildlife and sensitive species. Disturbance of riparian vegetation and soil must be kept to a minimum. The standards may be accomplished by a variety of techniques depending upon the beneficial uses in question. These techniques are not limited to: leaving conifer wildlife trees along these streams; leaving hardwoods, nonmerchantable conifer trees and brush that occur along them; having large woody debris placed in them during forest management activities, including logging; avoiding logging through them; and overall, maintaining and protecting the integrity of the watercourses.

h. Riparian area buffers identified on-the-ground for protection of specific riparian area resources would have no-scheduled harvest planned. Harvesting within these riparian buffers might occur for in-stream/streambank improvement projects, harvest corridors, fire control or other specific, short-term projects. Salvage logging within the riparian management areas should be discouraged except where detrimental environmental impacts and/or safety (e.g., bridges or culverts) damage would be anticipated from leaving downed trees.

i. While the State recognizes that the primary focus within riparian management areas on BLM lands will be streamside and associated vegetation, taking no action may not improve conditions within these areas, especially for large woody debris recruitment. As an example, the State is concerned about the large amount of alder-dominated riparian areas on BLM lands. These hardwood stands currently do not have the near-term potential for producing effective types and quantity of coarse woody debris nor will they likely have that potential in the future unless restoration measures (e.g., planting conifers within hardwood-dominated riparian areas) are taken.

For both woody debris and water quality problems, restoration projects, if implemented, should use adaptive management combined with intensive evaluation, monitoring, and data evaluation to determine long-term and short-term tradeoffs. Strict project standards followed up by evaluation and monitoring are the keys to a successful stream restoration program.

j. Exclude livestock in grazing allotments where poor riparian area conditions have been identified until such time as the riparian area reaches good condition.

k. Mining activities in or adjacent to streams should be managed in a way not to adversely impact riparian area vegetation and water quality.

6. Wetlands

BLM should increase its recognition of wetlands as a riparian resource in a manner consistent with the Bureau's Riparian-Wetland Initiative for the 1990's. Recommendations that the State would suggest be included in the final plans are:

a. Specifically name wetlands as features for which riparian management areas will be established;

b. Specifically identify wetlands that will be restored or enhanced.

c. Acknowledge the need to coordinate and cooperate with public and private landowners (via Statewide memorandum of understanding) in order to 1) develop a common inventory of wetlands; 2) establish criteria for determining wetland significance for protection or restoration; and 3) develop coordinated priorities to protect and restore public wetlands.

d. Acknowledge that the preservation of wetlands on BLM lands makes a major contribution to the attainment of the Oregon Benchmark goals on wetlands (i.e., 100% of 1990 Oregon wetlands still preserved in the year 2000).

The State endorses the Medford District and the Klamath Falls Resource Area inventory of wetlands and recognition of smaller one- to three-acre sites. This should set a standard that other districts should follow in their final plans.

7. Summary

BLM districts should develop and utilize comprehensive watershed management plans to improve water quality, water quantity, and fish and wildlife habitat within riparian areas. Continued

research and cooperation among federal, state, Tribes, and the private sector should improve/maintain acceptable riparian area conditions. Best Management Practices setting measurable standards and the identification and protection of unstable areas would further help maintain water quality. Monitoring, using measurable standards, is the key feedback mechanism for BMP implementation, effectiveness, and cumulative effects analysis.

O. Air Quality. How should BLM address the use of prescribed fire as a forest management tool in terms of the potential impacts on air quality?

The State supports a balanced ecological strategy for managing forests in Oregon. An ecological approach to management may entail a greater use of prescribed burning. If prescribed fire is going to be utilized by BLM as a forest management tool, state and federal air quality requirements must also continue to be met.

The draft BLM plans have stated that prescribed burning will be done in accordance with the smoke management plan administered by OEQ and the Oregon Smoke Management Plan (OSMP) administered by the Oregon Department of Forestry. Incorporated into the OSMP is a goal for reducing emissions from prescribed burning by 50 percent by the year 2000.

1. PM10 Nonattainment Areas

Prescribed forest burning and wildfires in west-side districts can affect air quality in both western and parts of central Oregon. Of particular concern are areas which do not meet state and federal health standards for small particulate matter (PM10). Currently these areas are Medford-Ashland, Klamath Falls, Grants Pass, Eugene-Springfield, and Oakridge.

Although prescribed burning is not a significant contributor to PM10 levels in the areas noted above, there is still a need to minimize smoke impacts, in order to ensure that air quality standards are attained by the federal deadlines specified in the Clean Air Act. OEQ has developed PM10 burning smoke impacts in these areas. The Department of Forestry's OSMP is directly tied into these PM10 control strategies.

2. Prevention of Significant Deterioration

The State is also concerned about maintaining clean air in areas currently meeting air quality standards. Contributing prescribed burning impacts could aggravate PM10 levels in these areas leading to the nonattainment designation and development of control strategies as discussed above. In addition, the federal Clean Air Act contains pollution limits known as Prevention of

significant Deterioration Increments which limit the amount of emissions that can be added to a "clean" airshed. If the allowed deterioration increment is consumed, then further growth must be restricted, such as new and modified major industrial sources of pollution.

3. Visibility Protection

The State recognizes the importance of protecting federal Class I areas (wilderness areas and Crater Lake National Park) from smoke impacts as a result of BLM prescribed burning in western Oregon. The federal Clean Air Act requires states to improve visibility in these Class I areas. Air quality monitoring in the Cascades has shown a 65-75 percent improvement in visibility in recent years. The Oregon Visibility Plan, developed by OEQ in 1986, is largely responsible for this progress and is closely linked to the OSMP.

4. Summary

The State believes that the final BLM plans should specifically address each of the three issues outlined above in areas where smoke impacts from prescribed burning could potentially occur. Any increases in prescribed burning including "understory" burning should be analyzed from an air quality standpoint.

In addition, the recent emergence of the forest health problems in central and eastern Oregon may expand the role of natural and prescribed burning on some of the forested land administered by BLM. The extent to which this could occur needs to be assessed prior to the start of any increased burning to ensure consistency with the Oregon's State Implementation Plan and OSMP. Continued coordination and communication among federal and state agencies in addressing these air quality concerns should be stressed.

E. Tourism and Recreation. How should BLM manage for recreation, visual resources, and Wild and Scenic Rivers?

BLM lands contain a variety of significant natural resources of recreational value, including wildlife, wilderness, lakes, and rivers. These resources have existing and potential values for local residents and also serve as an attraction for tourism from outside a specific BLM district.

As Oregon's and the nation's population grows, the demand also grows for tourist attractions and outdoor recreation. At the same time, the State, in an effort to expand its economic base and to mitigate the cyclical nature of an economy heavily dependent upon timber and agriculture, increasingly emphasizes

tourism, recreation, and the service industries which accompany them. Any long-range plan for BLM lands in Oregon should give more weight to diversified use of these lands if Oregon is to have balanced growth.

The State has addressed recreation uses and needs through statutes and state land use planning goals. The Oregon State Comprehensive Outdoor Recreation Plan (SCORP), with the Oregon Outdoor Recreation Plan 1988-1993 and the Recreational Supply Bulletin and Recreational Needs Bulletin, provide comprehensive technical information and assessments for analyzing recreational growth and needs throughout the state. Furthermore, the State's recreation paper (Appendix 1), titled Recreation on BLM lands - State Position Paper, presents recommendations on improving recreational and tourism opportunities on BLM lands. We encourage districts to incorporate the State's recommendations and technical expertise when developing their final RMPs/EISs.

1. Recreational Tourism

Many proposed recreational developments and management actions have direct impacts on the future of recreational tourism in Oregon. Several of these actions which BLM should consider in its final plans include:

a. Coordination with State and local governments on actions which may influence our Regional Strategies and Community Initiatives Programs.

b. Development of a multiple-agency recreation planning program to promote regional recreational development and tourism.

The development of recreational/tourism strategies by State and federal governments and the private sector is one essential component of Oregon's plan to diversify its economy.

2. Dispersed Recreational Demand

The 1988 SCORP projects demand for a variety of dispersed recreational activities. As identified in this document, merely considering activity demand is insufficient to address recreational diversity. Equally important is to consider the desired characteristics of the setting for a given activity. These characteristics in SCORP have been defined in terms of the Recreational Opportunity Spectrum (ROS).

The Klamath Falls Resource Area was the only plan which recognized ROS to identify recreational opportunities. We commend them on this effort and recommend that the five westside BLM districts incorporate this rating into their final plans.

The SCORP analysis has identified a need to supply more "primitive" and "semiprimitive" recreational opportunities. While it may be difficult to furnish the specific kind of recreational setting because of BLM's checkerboard ownership, Special Recreational Management Areas, Areas of Critical Environmental Concern, Outstanding Natural Areas, Research Natural Areas, scenic areas, plus other special sites may possess some of the characteristics needed for "primitive" and semiprimitive recreation. The state encourages districts, where appropriate, to use the ROS to identify "primitive" and "semiprimitive" recreational opportunities.

3. Wilderness

Soda Mountain Wilderness Study Area. -- BLM completed its Record of Decision for the Oregon wilderness study areas in October 1991. BLM's final decision package, which must be approved by Congress, recommended that 48 study areas encompassing 1.3 million acres be designated as wilderness. All but three of the wilderness study areas (two are islands) are located east of the Cascade Mountains.

Soda Mountain is the only mainland BLM study area recommended for wilderness west of the Cascades. Located in the Ashland Resource Area of the Medford District, it encompass some 5,895 acres of which 5,867 acres are being proposed for wilderness.

Soda Mountain - Pilot Rock area is an extremely unique transition zone where coastal, high desert, cascades and Sierra ecosystems converge. Because of its geographic location and geologic history, many plant and animal species, not found anywhere else in Oregon, have become established. Soda Mountain also provides an important habitat for summering and wintering big game with much of the area identified as "Critical Deer Habitat Area" by the U.S. Fish and Wildlife Service in the Draft Recovery Plan for the Northern Spotted Owl.

Over since BLM began evaluating sites for Wilderness consideration, there has been strong public interest in expanding the Soda Mountain area. The Governor's Forest Planning Team visited Soda Mountain earlier this year to get a first-hand look at the area and discuss its status with local citizens and BLM.

Since the area is ecologically unique and due to a strong interest by the public, the State recommends that the proposed boundaries of BLM's Soda Mountain Wilderness be further evaluated to determine if additional land should be wilderness beyond what has been recommended in BLM's Wilderness Study Report -- Record of Decision. This evaluation should be conducted before final legislation is drafted for Congressional approval. BLM is

encouraged to carefully manage the entire area of public interest, outside of BLM's proposed WSA boundary, in order to protect its current ecological values and suitability for wilderness.

4. Trails

The draft plans propose significant additions to recreational trails on BLM lands. The State supports this direction especially for those trails linking recreational sites, those allowing access to Special Recreation Management Areas, and those providing connectors to other recreational trails.

The State encourages each BLM district/Klamath Falls Resource Area to review recommendations for trail management in our recreation paper (Appendix 1). Some of the recommendations noted in the paper include: develop trail plans within each proposed project area, buffering, appropriate signing, rerouting, and implementing silvicultural practices to mitigate impacts. We urge that these recommendations be considered in the final plans.

5. Developed Recreation Sites

The preferred alternatives propose substantial increases in camping and day-use sites, in many cases more than doubling current provisions. We are very supportive of this increased emphasis. High priority for such development should be given to those sites supporting local recreational and tourism strategies.

6. Wild and Scenic Rivers

The State gives a high priority to the Federal Wild and Scenic River program. It, along with the State Scenic Waterways program, is critical in maintaining the natural resource and recreational values on Oregon's waters.

The following concerns have surfaced with all of the draft plans:

a. The draft plans do not make it clear whether federal land management actions that potentially could have impacts on designated waterways in the State system will be coordinated with the State.

b. Technical procedures for determining river suitability were not sufficiently explained in the draft plans. Issues include percent of land ownership by BLM; the criterion used for ranking rivers as suitable; use of "outstandingly Remarkable Values" (ORV) in rating; and use of economic costs and local support criterion.

Given the considerations noted above, the State believes that the methodologies used to determine suitability of wild and scenic rivers should be reviewed in preparing the final plans. We recognize that all the rivers found eligible are not necessarily suitable. But we believe that the current method used by BLM may not be adequate for making that determination.

Criteria that BLM districts should consider when analyzing suitability of rivers should include:

a. Aggregated values of a given stream.

b. Importance of aggregated values on both a statewide and SCORP regional level.

c. Importance of smaller streams to program.

d. Non-local as well as local support for a given stream.

Visual management on scenic rivers is best determined through the river planning process. This provides for comprehensive development of management standards for all values appropriate to a given river. Such standards should be based on the identified ORVs regardless of river designation. In terms of visual resource management, the State recommends the following management/protection standards:

a. No scheduled harvest (visual resource management I) in river corridors, under its administration, designated as wild.

b. Rivers or segments of rivers designated as scenic should be managed to maintain and provide recreation opportunities in a near-natural setting. While silvicultural practices could occur within the 1/4 mile corridor, these practices should not substantially impact the or its immediate environment. Where scenic is an ORV currently meeting visual resource management (VRM) I, maintain the visual quality; likewise, where VRM II exists maintain and protect its scenic value. When VRM III exists, BLM should attempt to enhance visual quality to VRM II.

c. River or segments of rivers designated as recreational should be managed to maintain ORVs for which they are designated while providing river-related recreational opportunities in a recreational setting. On rivers where scenic or recreation is identified as the ORV, standards should be implemented which would protect and enhance existing scenic conditions.

Where neither scenic or recreation is an ORV, the VRM class should be determined through the individual planning process. For these rivers, visual resource management class III should be considered the minimum.

d. In areas where more restrictive land allocations are already in place (e.g., primitive recreation, ACECs or Special Recreation Management Areas) the more restrictive standards should apply.

e. BLM should concentrate on 1/4-mile corridor along rivers in designing plans for stream with wild and scenic designation. BLM should also manage adjacent lands beyond the 1/4-mile boundary, where necessary to protect ORV.

f. All values on eligible rivers should also be maintained at their current level for the plan period (10-15 years) or until Congress acts.

The State strongly encourages BLM districts to work with adjacent landowners, the State and the public when analyzing streams for designation. Additional pertinent comments regarding wild and scenic rivers can be found in the Department of Parks and Recreation's response found in Appendix 2.

7. Off-Road Vehicles

Various forms of off-road driving are projected to increase in many of the draft plans. With their nearness to major population centers, BLM lands are a major provider of this type or recreation in western Oregon.

Off-road vehicle recreation, while enjoyed by individuals and clubs, has created some land use controversy over the years on federal and state lands. To mitigate these potential problems, the State recommends that BLM districts include provisions in their final management plans for designating areas to meet off-road vehicle demand. We strongly recommend that off-road vehicles use be included in a comprehensive road management plan which should be developed by each district.

BLM should strengthen its standards and guidelines for off-road vehicle use. Brochures should be published for public distribution showing locations where off-road vehicle use is permitted and explaining regulations on use.

8. Scenic Highways

The public's perception of how BLM lands (and other ownerships) are managed is in many cases determined by what people see as they travel the highways and hike the trails. This is a major reason for maintaining visual quality along roads, trails, developed recreational areas and other visually sensitive sites.

Scenic quality contributes to the increasing tourist industry in western Oregon. Hundreds of miles of State highways run through BLM-administered lands. Highways 22, 26, 34, 38, 42, 62, 126, 138, 140, 199, and Interstate 5 are just a few of the routes passing through BLM lands that are used by Oregonians and out-of-state visitors. With this in mind, BLM districts should carefully consider scenic quality in their RMPs/EISs.

It is recognized that maintaining continuity in visual quality on BLM lands is somewhat complicated by its checkerboard ownership. In many cases adjacent ownerships are intensively managing their resources without a high degree of visual quality in mind. This, however, has changed as revisions to the Oregon Forest Practices Act rules (ORS 527.610 Sections 10 and 17) have set visual standards and identified specific highways for visual protection. Visual quality most likely would be enhanced if the six draft plans preferred alternatives were implemented.

BLM's draft plans have classified and are proposing visual protection standards for many sensitive areas: ACECs; SRMA; Wild and Scenic Rivers -- McKenzie and Rogue; travel corridors -- Mt. Hood Corridor, I-5, Marys Peak Road, plus other recreational sites. The State supports the visual protection of sites presented in the preferred alternatives, and suggests they provide adequate visual protection along other visually sensitive highways.

The State recommends the following regarding visual quality:

a. BLM districts should more precisely inventory and reevaluate their visual protection recommendations in the final plans for major highways that pass through BLM lands. The analysis should identify those highway or travelway segments appropriate for visual management. Existing visual conditions along these highways should be described, as well as the directives to develop management plans to achieve expected future conditions.

b. Scenic values along the major highways, cited above, should not fall below visual resource management (VRM) Class III. The State believes that VRM Class IV (modification) would not retain the visual quality objectives along these important travel corridors. The application of new silvicultural concepts by BLM may help mitigate visual concerns.

c. Long-term visual management objectives should consider the use of silvicultural practices (e.g., uneven-aged management or underburning) in order to accomplish the VRM objectives.

d. BLM should work with adjacent landowners and others to maintain visual continuity.

The State supports BLM's Backcountry Byway Program.

We also support Salem District's special protection for the Mt. Hood Highway corridor including land exchanges to promote visual quality.

With an increased interest in driving-for-pleasure, these designated routes will give the public sightseeing and wildlife viewing opportunities on lands administered by BLM.

9. Technical Issues

a. Estimates of Recreational Use

We understand that BLM does not currently estimate recreational use on lands under its jurisdiction. Therefore it used activity occasions derived from SCORP, adjusted based on BLM's proportional forecast recreational land base for this planning period. We concur with this methodology, but urge BLM to develop methods of use estimates more appropriate to BLM lands in the future.

b. Economic Valuation of Recreation

Analysis of the economic benefits of recreation use should be developed with values appropriate to BLM lands. For example, we understand current methodologies do not place economic values on recreational activities occurring within a BLM district produced by residents within that district. We think that the transfer payments of recreation produced by a resident of one county recreating in another county. We urge that current recreational economic methodologies be reconsidered so the full value of recreation can be described in the final RMPs.

F. Timber Management. Are BLM's timber growth and yield assumptions valid? How will silvicultural practices be used to support projected harvest levels? Will BLM be able to produce the harvest levels predicted by land allocation? Has BLM adequately address forest health?

Timber harvest from lands administered by BLM has been and will continue to be a major source of logs available to local mills throughout Oregon. Over the last ten years, 11 percent of the total volume harvested in Oregon has come from BLM lands. In

1991, over 486 million board feet was harvested from Bureau lands which represents eight percent of the total volume harvested statewide. Forest management activities not only furnish jobs for local economies but also furnish important revenue source for counties to support schools and roads.

BLM's legal mandate for managing its lands has come from the O&C Act and the Forest Land Policy and Management Act. These laws, which were discussed in the Ecosystem Management section of this paper, directly address the management of lands administered by BLM. The O&C lands have been managed for timber for the last fifty years as directed by congressional mandate. Public Domain lands administered under the Forest Land Policy and Management Act consider more multiple use policies.

1. Forest Land Management

Under the current plans, forest management entails implementing mainly even-aged management (clear-cutting) followed by the application of intensive management practices (e.g., planting, planting, fertilization, thinnings, and controlling competing vegetation) on short rotations (40-60 years). The primary objective is to intensively manage forest stands to reestablish and perpetuate the growth of Douglas-fir/hemlock stands on a sustained yield basis. Certain species are favored depending upon the ecoregion within districts.

Implementation of this strategy represented accepted forest management practices for managing western Oregon forests in the past. Recently, however, these practices have been questioned due to air and water quality problems and protection of sensitive, threatened, and endangered species have become concerns. This has required BLM and other forest landowners to reassess their approaches to resource management.

In the draft plans, BLM is proposing to meet this challenge by adopting an ecosystem approach to forest management known as biological diversity. Biological diversity represents a significant change from BLM's current management philosophy. While there are questions about the legal sufficiency of this new strategy in meeting the O&C Act, the State believes that biological diversity goes a long way toward addressing concerns about forest health and maintaining productive ecosystems.

The preferred alternatives are designed to produce mature and older forests over time. Because less older forests will be provided on adjacent private lands, we are concerned that the checkerboard ownership pattern makes it unlikely that the objectives for management will be achieved. In order to produce the desired future condition of major forest areas, nearly complete watershed-level ownership is necessary.

A variety of techniques have been used to provide older age class forest. Old Growth Emphasis Areas (OGEAs) I'e use 300 year rotations and density management to accelerate older forest characteristics. Connective Areas (CAs) are managed using 150- or 200-year rotations. Due to the numbers of overstory leave trees planned, we anticipate that management in the Diverse Forest Management area will produce characteristics similar to older stands for about 2/3's of the rotation. BLM's efforts are innovative in that they attempt to maintain spotted owl habitat over time while still producing timber from the base land. This strategy is not without controversy, however, as concerns have been expressed over the sufficiency of this strategy to maintain dispersal habitat for spotted owls. (Note wildlife management section of this coordinated response for a further discussion.)

The Medford District has divided its planning area into southern and northern management units based on site productivity, plant community, and forest condition. Proposed forest management prescriptions have been tailored to each area to better fit conditions on the ground. Variations in conventional forest management practices are also being proposed in frost-prone areas. The State compliments the district for this effort.

Implementation of uneven-aged management, especially in the Klamath Falls Resource Area's ponderosa pine and pine-associated stands, is also supported by the State. Both the Medford District and Klamath Falls Resource Area mention using uneven-aged management as a silvicultural management tool. A more comprehensive explanation would be helpful on how these, and possibly other districts, will implement uneven-aged management and how this differs from the various green tree retention standards being proposed in the preferred alternatives.

Our concern, which will be reiterated again in following sections, is the uncertain outcome of applying untested silvicultural prescriptions through biological diversity. It will take highly trained professionals to implement and monitor biological diversity to determine if the program is successful in meeting each district's (including western Oregon as a whole) expected objectives.

Adequate funding is necessary for a successful program. BLM is proposing a much higher level of intensive management (e.g., more genetic plantings and pruning) than ever before. Historically, monies have not been available for intensive management programs. Furthermore, timber receipts have been used to fund many of the activities. We question how BLM intends to obtain the necessary funds to implement biological diversity with reduced harvest levels and higher predicted costs. BLM should evaluate the possible impacts on management programs and outputs (e.g., allowable sales quantity) of lower funding levels.

We direct your attention to the Department of Forestry's response (Appendix 2) and Oregon State University's Report (Appendix 3) for more detailed comments specific to individual BLM districts/resource area.

2. Land Suitability

BLM districts have inventoried their lands by using a system known as the Timber Production Classification System (TPCC). GIS mapping has helped identify the various TPCC classifications. According to the draft plans, this inventory identified the physical and biological capabilities of the lands to support and produce forest products on a sustained yield. Some 2 million acres were identified as suitable in Western Oregon/Klamath Falls Resource Area of which 1.7 million acres would be managed for varying degrees of timber harvest. Less than 1 million acres would be allocated to general forest under the fully restored alternatives. Other land allocations (e.g., Old Growth Emphasis and Connectivity areas) would allow less intensive timber production as compared to the general forest allocation.

The State recommends that BLM, using data obtained from the Forest Intensified Research project, Department of Forestry, and other studies, continue to validate the accuracy of data obtained from its inventory progren and further evaluate lands currently determined to be unsuitable. If it can be determined that some of these lands can be managed for timber production, they should be returned to the suitable base. Likewise, lands in the suitable base which are determined to be unsuitable through monitoring, should be taken out of the base.

Comments regarding BLM's TPCC inventory system are found in Appendix 3 -- Oregon State University's Report (page 43).

3. Growth and Yield Assumptions

Estimation of the sustainable yield level is highly dependent upon a number of assumptions: land bases, timber inventory, management activities, and growth end yield assumptions. If the assumptions are not correct, one may find in the decedas ahead that either the harvest level was not sustainable or thet the harvest level was less than could have been realized.

The allowable selee quantity (ASQ) on each BLM district was calculated using a computer progran nased TRIM-PLUS. Districts used a combination of two growth and yield models (Stand Projection System -- SPS and ORGANON) for estimating future yields from managed forest stands.

5. Timber Supply

The primery driver of BLM's socio-economic analysis is timber supply. BLM used an innovetive approach to model timber supply. This approach has much merit. However, some basic assumptions need to be revisited and the analysis for the final plans should reflect a nore uncertain picture of timber supply in Oregon. In eddition, BLM should explain how the timber supply analysis was used in formuleting its draft alternatives and how it will be used in formulating the record of decision. Please review the Department of Forestry's draft response found in Appendix 2 for more detalls.

A summery of the concerns and recommendations regarding timber supply include:

a. Due to the uncertainty in timber supply, it is reasonable to assume that stumpage prices will increase substantially nore than has been predicted in the draft plans. We encourage BLM to reevaluate the stumpage prices used in its analysis to better align then with current projections.

b. Overall, analysis of the timber supply situation is more optimistic than warranted. The draft plans portrey what is likely to be an upper level of timber supply. Additional scenarios should be portrayed reflecting lower potential harvests from private owners, the Forest Service, and forests managed by the Oregon Department of Forestry. Uncertainty about the implementity of implementing planned BLM timber sele levels should also be documented.

c. The public's sensitivity toward harvesting younger stands (50-80 years) of timber ney force BLM to reconsider later decadal nanagement regimes. Current restrictions on federal lands have caused increased harvesting of smaller dieneter logs on privata lands. This may translate into longer rotatione on BLM lande than would otherwise be the case. BLM should evaluate the effects of longer rotations and higher minimun harvest ages on all lands managed by BLM.

d. Timber sale quantities are highly dependent upon intensive nanagement ectivities yet, historically, BLM nanagement activity accomplishments are well below planned levels.

Levels of management practices on BLM forest lands are dependent upon levels of federel funding. These appropriated funds have, most of the time, been sufficient to ineure adequate regeneration of cutover stands but have often been insufficient to take advantage of opportunities to significantly increase growth levels of the Bureau's Oregon forest lands. Planning for socio-economic impacts of projected timber supply levels should consider the unstable

Several questions have been raised regarding BLM's extensive inventory system including sampling selection, unit design, and intensity methods. Considerable work has been done regarding BLM application of SPS (an even-aged Douglas-fir or western hemlock calibrated model), to stands where green trees will be maintained.

Some of the draft plene noted thet the preferred alternative includes many elements which are recognized to be substantially untested modeling of sustained yield as compared to other alternetives presented. It is further noted that the level of confidence in yield and harvest values is lower than other alternatives.

The State is concerned that ASQ levele predicted in the draft plens may be inflated estimates of the actual volume that can be expected. Questions regarding inventory design, site index equations, volume and taper equations, growth and yield from intensive management practices, slash harvest eqge, and empirical yield tables need to be discussed in more detail in BLM's final plan. Further analysis should also be conducted on the allowable cut effect of deferring for 80 years some of the OGEAs even though they remain in the timber base.

The State would direct BLM's attention to Oregon State University's Report on growth and yield in Appendix 3.

4. Forest Health

Oeteriorating forest health conditions can be visually detected as one travels in eastern Oregon. Forest health is also a serious concern in western Oregon forests where insect and disease mortality is very common. Forest health conditions influence the amount of timber yield sustained over time, the ability to maintain critical fish and wildlife habitat, and the maintenance and development of recrsation opportunities on all forest lands regardless of ownership.

BLM's draft plans fail to adequetely address forest health issues which have recently received public and political attention. In most of the plens, forest health is not mentioned in the goele or objectives of the proposed nanagement alternatives. Medford and Klamath Falle draft plans come the closest to addreseing health problems and solutions.

The State recommends that BLM's final plens set specific goels and objectives including monitoring detailing how management strategies of the preferred alternatives will address forest health problems and what mitigative measures will be implemented to improve unhealthy forest conditions on BLM lands. We encourage BLM to work with other forest landowners to improve forest health.

nature of federal funding of forest management activities and the difficultiee of securing funding for these activities over the next several decades.

e. Timber supply is the primery driver of the BLM socio-economic analysis but does not appear to be en important part of alternative formulation in the draft plans. One would have expected BLM to use this analysis as an integral part of developing plan alternetives; the potential exists to use the analysis as a key decision criterion for the record of decision.

f. The Bureau eppears to have used a harvest flow constraint know as Sequential NonDeclining Yield. The basic concept is to find a harvest level that can be sustained over time. This process is a fairly rational approach to regulation when trying to balance etability goals with forest regulation goals. BLM did not do any sensitivity analyses on alternative flow constraints. In light of concerns for community stability, BLM might want to present a "departure alternative" in its final plan.

g. Wildlife Management. How should BLM districts manage for big game? What snag levels should BLM provide for cavity-dependent birds and other wildlife? How should sensitive, threatened and endangered wildlife species be managed?

1. Deer and Elk Habitat

Big game is an extremely important resource which depends on cover and forege found on BLM administered lands. Big game provides recreation to the public in the form of hunting and viewing opportunities. The Ocan's Creek Elk Viewing area is an exaple of BLM commitment, in coordination with the State, to develop an interpretive roadside program for elk and other wildlife.

BLM districts have appropriately utilized the Wiedom Model in determining big game habitat conditions. However, BLM has not stated how it would improve habitat effectiveness (HE) for big game in areas with low HE indices.

a. Cover

Cover is one of the critical components that needs to be available on BLM lands if management objectives (i.e., HE indices and number of animals) set by the Oregon Department of Fish and Wildlife (ODFW) are to be achieved. Cover, which includes the subcategories of optimal, thermal, and hiding cover, has been evaluated in the draft BLM plans. Existing cover conditions were rated as marginal in most of the elk management emphasis areas.

The reason given for these marginal conditions is past forest management practices on BLM and adjacent private lands. Under their preferred alternatives, BLM districts are predicting no change in the short term for cover conditions. Poor conditions would improve in the long-term in the OGEAs but would remain marginal in the general forest area. The State is concerned about long-term marginal conditions in the general forest.

The final RMPs should address how BLM proposes to improve marginal cover conditions and to meet HE and hard number objectives. BLM should work with ODFW on meeting these management objectives.

b. Forage

Forage quality and availability are also important elements necessary for big game survival. Like cover, BLM draft plans indicate marginal current conditions in most of the emphasis areas/analytical watersheds. Lack of forage or poor forage quality has led to deer and elk migrating onto private lands thus leading to land use conflicts. BLM districts have mentioned the use of forage seeding on harvested units and road rights-of-way. Coos Bay, in particular, is planning to seed up to 50 percent of the acres harvested each year.

BLM districts should consider the following recommendations on forage in their final plans:

(1) The final RMPs should address how BLM proposes to improve marginal forage conditions and to meet State HE and herd number objectives. BLM should work with ODFW on meeting these management objectives.

(2) Expand, where feasible, the forage seeding programs to benefit big game. BLM should increase its effort to search out and/or create native grass and legume seed sources for forage seedings palatable to big game species.

(3) BLM should fund forage seeding through timber sale receipts.

(4) BLM districts, in particular the Klamath Falls Resource Area, should structure grazing allotment plans to mitigate forage conflicts that say arise between livestock and big game. Alternatives such as shortening livestock grazing periods in the fall to allow green-up for winter forage may be helpful in defusing forage problems.

c. Roads

A plan to manage roads in a responsible manner is perhaps the most powerful management tool BLM has to benefit big game in western Oregon. Open roads allow easy access to big game herds

and other wildlife. This accessibility has exposed deer and elk to greater human-caused disturbances. Big game must expend more energy to seek hiding cover from hunters and others when open road densities are high.

Open-road densities exceeding 4 miles/square mile are common on all of the BLM districts. Declines in big game habitat caused by a high density of open roads has been well documented. We direct your attention to the roads management section, Appendix 1.

2. Snags and Dead-and-Downed Wood

Dead and down woody material is increasingly recognized as an important component of the forest ecosystem. BLM should provide enough "wildlife trees" to maintain viable populations of birds and other wildlife. Additional snags should be taken to ensure the development of snags over time.

Green trees should be left on regeneration units to provide future snags. BLM districts are commended for proposing to leave 6-20 green trees per acre. However, residual green trees left on harvest units may not be long lived or may blow down such that snags may be unavailable in the future. Thus, it may be necessary to girdle or blast out the tops of some of these trees over time in order to produce snags to support desired population levels.

BLM should have concrete proposals to create snags including estimated budgets and work-month requirements. BLM should also adjust ASQs to account for these created snags over time. BLM should fund research to determine whether artificially created snags have the same utility for wildlife as those produced naturally.

The State supports BLM's proposals for retention of dead-and-downed wood. Where feasible, BLM should provide downed logs greater than 24" diameter at a minimum rate of 2/acre. BLM should include a variety of sizes and species of dead-and-downed wood in contract stipulations for planned timber sales. BLM should establish a monitoring system to ensure that target levels are attained.

3. Sensitive, Threatened and Endangered Species

a. Spotted Owl

The northern spotted owl was listed as a threatened species on June 26, 1990 as it was determined that declining habitat conditions were leading to possible extinction. Several conservation strategies have been developed, most notably the Interagency Scientific Committee's (ISC) Report and the Draft Recovery Plan, to address the northern spotted owl's recovery.

A Recovery Team was appointed by Secretary of the Interior Lujan to develop a recovery plan that would consider the habitat for the spotted owl and other species plus the economic effects of implementing a recovery plan. The State has a member on the 18-person Northern Spotted Owl Recovery Team and has contributed support, from several State agencies, to the process.

BLM's draft preferred alternatives propose to address spotted owls and other critical species through application of ecosystem management principles. The overall intent of this strategy according to BLM is: "To manage lands to contribute to community stability consistent with maintenance of ecosystems and a diversity of species; contribute to long-term recovery of the northern spotted owl; and maintain fish and wildlife and recreation, scenic and other resources." The objective is to maintain many of the old growth, mature forest conditions necessary for the spotted owl and other species while permitting the production of a certain level of goods and services on lands available for timber harvest.

As noted in the Old Growth and Mature Forest section of this coordinated response, districts have taken various approaches to maintaining and producing mature/old growth stand conditions. The concepts revolve around creating Old Growth Emphasis Areas (OGEAs) and Connectivity Areas (CAs) and Klamath Falls and Resources Area's Protected Habitat Areas (PHAs) scattered throughout the districts.

BLM's Salem District has identified three classes of OGEAs and two types of CAs in an effort to maintain/create older forest structure. The preferred alternative strategy for OGEA 2 (Nestucca block) is calling for more intensive management than in OGEA 1 blocks. Due to the current stand structure existing in the Nestucca block, there is a need to accelerate older forest conditions. While this need is recognized, there is a concern that the management scenario being proposed is untested and possibly too aggressive. We may not meet the intent of the spotted owl recovery plan. The Governor's Planning Team and state agencies recently visited the site with BLM resource area managers to discuss proposed management prescriptions under the preferred alternative.

Other concerns have also surfaced regarding the retention of existing stands of old growth and whether or not BLM's older forest strategy will be sufficient to meet dispersal habitat needs of the spotted owl. Furthermore, BLM has not done a risk analysis and developed contingency plans for OGEAs and CAs that potentially could be destroyed by a catastrophic event.

The effectiveness of CAs as corridors for wildlife movement has not been adequately addressed in the draft plans. Some of the factors that may affect the utility of these areas include: their

width, current fragmentation of habitat within the corridors, the effect of timber harvest on current and future habitat mosaics including anticipated patch size and ownership patterns, and different dispersal needs of wildlife. BLM should address these factors in their final plans.

Intensive management of the forest landscape has created the current stand conditions that exist today. To reach conditions we desire in the future may require some manipulation (less intensive than in the past) of forest stands to hasten old growth/mature forest conditions.

It is the responsibility of the US Fish and Wildlife Service to determine whether BLM plans comply with the Endangered Species Act. The State supports the general principles and overall approach taken in the Draft Recovery Plan for the Spotted Owl as a means toward resolving the present impasse. The Draft Recovery Plan for the Northern Spotted Owl, due to be released in 1993, should be adopted by BLM unless the U.S. Fish and Wildlife Service determines that BLM's land management strategy is adequate for protecting the spotted owl.

b. Bald Eagle

The State concludes that the implementation guidelines for the bald eagle recovery plan have been met by the districts. However, ODFW is specifically concerned about the bald eagle roosting area in the Soapposse block which has apparently received no special protection in the Salem draft RMP. We would ask BLM to contact ODFW regarding this specific bald eagle site.

c. Marbled Murrelet

With the recent lieting of the marbled murrelet as a threatened species under the Endangered Species Act, BLM must provide an in-depth analysis of the effects of the alternatives on this species. The definition for suitable habitat as currently used by BLM must be further refined in order to reflect site-specific information. From an operational context, the State recommends that BLM expand murrelet inventories and take interim measures to protect suitable habitat.

d. Other Sensitive Wildlife Species

Additional concerns have been expressed by ODFW and others on populations of other Oregon sensitive species (e.g., neotropical migrant birds) that may be impacted by BLM preferred alternatives. This concern especially applies to the general forest management area where the impacts of timber harvesting on these species may be severe, but applies to other allocations as well. The final RMPs need to provide clear direction for site-

specific protection of these species including information on protection of nest sites and other important habitat areas. BLM should take no action which would contribute to the listing of sensitive species. BLM should identify sensitive species occurring on their lands, mitigate impacts on sensitive species resulting from management actions, and monitor to assess the impacts of actions on sensitive species.

H. Old growth and Nature Forest. How will BLM manage its forests to maintain old growth and nature forest composition?

When people think of forests, they may envision majestic old growth. These old growth stands provide habitat for many wildlife species and furnish a variety of recreational experiences.

Old growth is also still important to the timber industry. Because of its size and the quality of the wood, these trees are especially prized by industry.

According to the BLM's 1988 extensive stand inventory, there are over 290,000 acres of existing old growth (200 year old) in the western Oregon districts. While various land allocations being proposed in each district's preferred alternative would provide some of these stands (e.g., Special Areas, wild and scenic river corridors, riparian areas, and wildlife habitat), many old growth stands would remain in the general forest allocation. According to the draft plans' preferred alternatives, some 40,000 acres of old growth in total would be harvested in the first decade of plans.

BLM districts are proposing several different techniques to maintain/produce older-aged stands. OGEAs use 300 year rotations and density management to accelerate older forest characteristics. CAs are managed using 150- or 200-year rotations. Klamath Falls Resource Area's preferred alternative calls for a system of 80-100 acre protected habitat areas each surrounded by a 1/4 mile buffer to maintain old growth in the western portion of their resource area. Residual trees (6-20 depending upon the land allocation) and other old growth components (snags and downed woody material) are to be left on units within the general forest allocation or nondeferred OGEAs and CAs.

BLM's biological diversity proposal is innovative but untested in that it will attempt to maintain old growth characteristics for species such as the spotted owl while still producing timber. According to the BLM's Executive Summary, 324,000 acres of old growth would be remaining after 10 years: 475,000 acres after 100

years would be considered old growth. This would be an alleged increase in total acres from the current inventory of 290,000 acres.

While the State supports BLM's approach to maintaining and protecting old growth stands through biological diversity, we are concerned about the impact that harvesting will have on old growth dependent species. We further realize that the harvest from these stands represents the most predictable portion of the allowable sales quantity in these uncertain times of timber supply.

The State's concern focuses on BLM's proposed harvest of old growth in the general forest allocation for the preferred alternatives. More specifically, there is currently a shortfall of biological diversity opportunities existing in the Coast Range due to human and natural disturbances. Most watersheds in the Eugene, Sales and Coos Bay Districts lack the habitat components necessary to maintain ecosystem management. Harvesting of old growth within the general forest allocation will further exacerbate the problem unless mitigative measures are considered.

The State believes that one solution to this problem would be to maintain within each third-order watershed example(s) of ecologically significant older forest stands. These stands should represent PNW 447 criteria, or if no stands having these characteristics are present naturally, stands with the most significant salvage or thinning histories. Protection of such stands will offer refugia for associated wildlife species, and may allow them to expand their distribution and populations as younger stands in the surrounding area mature over time. Other possible solutions should also be analyzed in an effort to address this concern.

The State recomends that BLM further evaluate the impacts on biological diversity (genetic, species, ecosystem, landscape) in the Coast Range from harvesting old growth in the general forest allocation in the preferred alternatives. BLM should further develop and analyze other alternatives which maintain biologically significant old growth stands while still producing economic opportunities. Conceptually, Alternative E's old growth strategy could act as a benchmark for other alternatives regarding old growth retention.

I. Livestock Management. How will BLM manage its grazing lands to produce forage for livestock and wildlife while protecting other resource values, in particular riparian areas?

Ranches located near land administered by BLM and the Forest Service, in many cases, depend upon livestock grazing from these lands. Historically, nearby cattle ranching operations use public lands as summer pasture and utilize home ranches to grow

irrigated hay for winter feed. Declines in livestock forage from the BLM could have an effect on local ranches. A decline in the economic stability of local ranches would create economic hardship on the communities in the surrounding area.

The State's recommendations outlined below recognize the economic and cultural facets of the livestock industry by proposing a program that we believe will ensure the long run, sustainable use of BLM lands by livestock while protecting sensitive resource values located on these lands. Most western Oregon districts have limited grazing programs on their lands, with the exception of Klamath Falls Resource Area. While most of the following comments and recommendations refer to the Klamath Falls Resource Area, they are also applicable to all BLM districts where grazing is permitted.

The Klamath Falls Resource Area currently has some 95 grazing allotments (81 permittees/lessees) producing 13,869 Animal Unit Months (AUMs) of forage annually. An additional 5,096 AUMs are classified as suspended non-use. According to the draft Klamath Falls RMP/EIS and personal communications with BLM staff, range managers (using a core team) have evaluated the impact of grazing on other resource values, especially streamside habitat and big game forage needs.

The Klamath Falls Resource Area has identified some 14 allotments in need of improvement. These allotments represent 61 percent of the total allotted grazing acres on the east side and 28 percent on the west side. In total, this represents some 57 percent of the allocated AUMs.

Klamath Falls' draft preferred alternative proposes that 13,185 AUMs per year be available which represents a decline of 5 percent from the current level. Justification for the decrease is based upon a need to develop upland water developments, improved riparian area conditions and improve forage for both livestock and wildlife.

We have several concerns regarding livestock management. First, there seems to be a large number of allotments which lack comprehensive allotment management plans. Without a plan for each allotment, combined with an aggressive monitoring program, how can the Klamath Falls Resource Area hope to improve unsatisfactory conditions in allotments currently needing rehabilitation? Will allotments identified as (I) in the plan become high priority for improvements when funding is available? While the core team approach used to identify resource conflicts in allotments is a good start, it should not be considered a substitute for allotment managements plans. Without allotment management plans and monitoring, degradation of the very values the Klamath Falls Resource Area is trying to protect or maintain could continue unchecked.

Furthermore, the Klamath plan permits annual grazing in riparian areas with currently less than good conditions. BLM should not allow grazing in such degraded areas except under strictly controlled management. If BLM cannot document initial recovery, they should change their grazing strategy or consider no grazing until recovery is achieved. The Governor's Watershed Enhancement Board wants to promote cooperative projects between the BLM and private owners where riparian areas cross mixed ownerships.

The State is also concerned about livestock impacts on fish and wildlife, with special emphasis on the Lost River and Short-nosed Suckers, big game, sage grouse, and other riparian dependent species.

The State supports a livestock management program which allows grazing while protecting resource values (i.e., water quality and fish and wildlife habitat). Assuming the need to more carefully control livestock grazing in riparian areas and improve forage conditions on several of the allotments, we believe the proposed short-term decline in AUMs seems justified. The State favors additional reduction of AUMs when resource degradation is apparent.

As part of the range management program BLM should:

1. Develop allotment management plans for every allotment.
2. Monitor allotment plans on a regular schedule.
3. Activate range improvement projects (seeding, water development, and prescribed burning) that will both increase forage productivity and draw livestock toward lands not currently grazed and away from those in poor condition.
4. Implement grazing systems such as seasonal use and deferred rotation grazing that better fit the livestock to the resource.
5. Attract livestock away from riparian areas by:
   - Developing other water sources
   - Placing salt blocks away from riparian areas
   - Planting other palatable vegetation
6. Limit livestock use in riparian areas to periods when forage and soils are most resilient and to uses determined by site-specific conditions.
7. Exclude livestock until the recovery of riparian area vegetation (to a good condition) is enough to allow managed grazing.

8. Maintain and protect streams in "good" condition; restore streams in "poor" condition.

9. Secure a stable funding source for livestock management program.

Short-term declines in AUMs may occur on specific sites, but production should stabilize and, perhaps, even increase over the long-run once stream and rangeland conditions improve and problems of redistribution and grazing administration are addressed successfully. Frequent monitoring of allotment plans, as proposed by BLM, will detect resource problems. Grazing strategies should then be adjusted where needed.

BLM already has one key to success for balancing forage use with the protection and rehabilitation of the resource base; the generally improving flow of information and ideas among its staff, the Forest Service, ranchers, and other resource users.

Two other success factors in this effort are the rapport between BLM and most allotment holders, and the expert help available from local soil and water conservation districts and conservation groups. Several BLM sponsored grazing projects in eastern Oregon (e.g., CAPP Creek) have shown that proper grazing management can support livestock while protecting other resources.

The State believes that local people continuing to work together in a cooperative spirit, watershed by watershed, will pay off in better resource management and an improved livestock economy.

J. Minerals and Energy. How should BLM recognize and manage its mineral and energy resources?

Mineral and energy resources can be found on many lands administered by BLM. These valuable resources include leasable minerals (oil and gas), locatable minerals (gold and other precious metals) and salable minerals (rock and aggregate resources). The location/extent of mineral resources depends upon the physiographic region. BLM administers both mineral estate and split estate lands.

While districts have discussed mineral and energy resources in their draft plans it is difficult to determine the location of these resources. In particular, State-owned mineral rights underlying BLM surface ownership have not been identified.

The State makes the following recommendations to BLM regarding minerals and energy which should be considered when developing the final RMPs/EISs:

1. Each one of the final plans should: a) acknowledge any state-owned mineral rights (list legal descriptions); and b) preserve, whenever possible, access to existing valid mineral rights.

   At the very least, the State believes that the management of severed estates with state-owned mineral rights should be specifically addressed and that the management direction offer the greatest possible latitude to the State.

2. BLM districts should recognize energy and minerals as an important resource when making land management allocations. Land available for these mineral and energy resource and development should be kept at the highest level environmentally possible in the preferred alternatives. Decisions to withdraw lands should be based on an open analysis with proper accommodation of current environmental protection and reclamation technology.

3. There is a need to better quantify the value of the resources and to factor the resource value into the BLM alternatives. Specifically, mineral withdrawals have been made without the benefit of a mineral inventory. Such an inventory should be conducted before withdrawals are recommended.

4. For all districts, the State encourages BLM to provide realistic opportunities for mineral exploration and development. Mining overlays and explicit standards and procedures to allow mining in other land allocations are viable mechanisms to use to mitigate conflicts.

While budgeting for mineral assessments has been a problem for BLM, the Department of Geology and Mineral Industries stands ready to assist districts in assessing the mineral potential on their lands.

K. Socio-economic. How will the adopted plan affect economic opportunities in surrounding communities? What impact will the plans have on socio-economic stability in the planning area and statewide?

The long-term socio-economic goals of Oregon's state government and its people are spelled out in Oregon Benchmarks: Setting Measurable Standards for Progress. The State recognizes the need to diversify its economy, particularly in nonmetropolitan areas. The plans as specified in the draft EISs are not inconsistent with this goal. However, without a coordinated policy response to the impacts of the proposed timber harvest reductions, the State's highest priority strategic planning goals (Key and Lead Benchmarks) in many resource areas are put at substantial risk.

1. Economic Benchmarks -- the goal of reaching the national average in per capita income particularly for regions outside of Portland metropolitan area and regional job distribution are severely impacted by the preferred alternatives.

2. Social Benchmark (specified as Benchmarks for People) -- achievement of goals relating to drug use, social harmony and job skills are adversely impacted by the structural economic change which will result from the preferred alternatives.

The State calls on BLM to provide the analytical ground work for an effective policy response to the fundamental social and economic changes which would follow the implementation of the preferred alternatives.

The economic and social conditions throughout Oregon are a major concern for the State. The management decisions taken on federal lands affect the economic and social welfare not only in nearby communities, but also the State as a whole.

Lands administered by BLM in western Oregon make a significant contribution to the economy of Oregon. State and local governments receive monies from management activities (mostly timber harvest) on BLM lands. BLM manages both Public Domain and Oregon and California (O&C) lands. Some 50 percent of revenues generated by timber receipts on O&C lands is given to western Oregon counties.

Many Oregon counties are very dependent upon revenues from federal lands which help finance schools, roads and local government. Douglas County, for example, derives over 60 percent of its revenue from BLM and Forest Service timber receipts; Josephine County, 16 percent; and Coos County, 14 percent. In 1991 alone, Oregon counties received some $93 million from timber receipts from O&C lands. The five-year average (1983-1988) of O&C payments to counties was $61 million a year.

Other direct revenue payments are also generated from the management of BLM lands. These revenues include mineral and grazing leases and in lieu of tax (public domain lands only) payments. Recreation (fishing, hunting, other recreational activities) on these lands also generates indirect revenues to local communities.

Declining timber harvests over the last two years have meant increased unemployment in timber-dependent communities throughout the State, increased social problems, and decreased county revenue. To address these problems, the State responded to BLM's Analysis of the Management Situation noting our concerns and making recommendations on how to analyze socio-economic impacts.

Over the last year the Governor's Forest Planning Team has worked with BLM at the State and district levels to better understand and make recommendations on socio-economic impacts of proposed BLM management decisions. The State's review of BLM's socio-economic analysis is based upon a paper titled: Socioeconomic Issues and Bureau of Land Management Planning transmitted to BLM from Governor Roberts in May 1991. (Note Appendix 1) This paper describes the economic and social analysis the State would like to see presented in each BLM plan. Note additional comments in Appendix 2 (Employment Division) and Appendix 3 (Oregon State University Report).

1. Socio-Economic Conditions

The State commends BLM for analyzing migration trends, unemployment rates and the economic structure of the regional economy. We question, however, the multipliers used by BLM in calculating direct timber and timber management jobs. To strengthen this analysis, we recommend the following additions and further evaluations:

a. Simple economic base analysis showing export base for counties in each district.

b. Demographic and occupational profiles for communities likely to be impacted.

c. Occupational profile of displaced workers.

d. Reevaluate (using a consistent set of models) the impacts to total employment of harvest reductions.

e. Expand mitigation discussion to include the adverse socioeconomic impacts of the plans and ways to lessen impacts.

The final BLM plans should also update the economic data presented in the draft plans to reflect more current information. (Note Appendix 3 for a more detailed discussion.)

2. Community Stability

We agree with BLM that impacts on communities will vary within each district and across districts. A more detailed analysis is needed which would allow BLM to systematically evaluate the impact of harvest reductions on areas not only within but also outside the districts. In other words, the plans should estimate the preferred alternatives impact on community stability based on the structure, occupational mix and demographics of communities.

3. Social Impacts

Social impacts are briefly mentioned in the plans, but there is no effort to systemetically analyze the likely impacts. We recommend using appropriate models (note comments from State Economists -- Appendix 2) to measure the social impacts. The key ingredient that needs to be addressed is an inventory of social impacts.

4. Recreation/Tourism Industry

In an attempt to diversify the economy of Oregon, the State supports an aggressive recreational/tourism program on BLM lands. While the recreation/tourism industry will not fully replace the personal income levels and employment opportunities the timber industry jobs produce, it still should help isolated communities in this transition period. Retraining programs sponsored by the State and federal governments will play a major part in this transition.

An alternative which emphasized recreation opportunities could have served as a benchmark from which to compare jobs gained from the various alternatives presented in the plans.

5. Monitoring

Monitoring should be an especially important part of the final BLM plans. While the draft plans include provisions for monitoring of natural resources, it should also include provisions for monitoring of socio-economic conditions and for modification of the plan based on changes in these conditions.

6. Summary

BLM districts have addressed the socio-economic impacts created by their preferred alternatives. BLM districts should strengthen their analysis and discuessions in the final RMPs/EISs to include a better analysis of: district economic base and the impact on this base of the alternatives; dislocated timber worker skills and reemployment opportunities; social impacts consistency in modeling, job multipliers, mitigation recommendations and monitoring.

Please review Economic Development Department, Department of Forestry, and the State Economist responses found in Appendix 2 and Oregon State's University's Report for specific recommendations.

with high road denaities (i.e., greatsr than 4 miles/square mile); watersheds with high off-road vehicle use resulting in unacceptable environmental damage; and sensitive wildlife areas. (Coos Bay and Klamath draft plans include this recommendation.)

4. Road density objectives for other areas would likely vary based on decisions made in the comprehensive road management plans.

5. The State recommends that BLM attempt to achieve a reasonable reduction (10%) in open road density over the next decade. This target may be difficult to achieve given the scattered ownership pattern of BLM lands. However, we encourage BLM to work together with adjacent landowners in an effort to accomplish this goal.

6. The State recommends that BLM's road management program be modified as needed to address the State of Oregon's recommendations for limiting development in rural interface areas.

Each BLM district is urged to coordinate with adjacent landowners and others in the development and implementation of a comprehensive road management program.

M. Special Plant and Tree Species. How should BLM protect special status plant and tree species?

1. Special Status Plant Species

BLM's draft plans have listed plant species found on each district. The State commends BLM on its commitment to protect those plant species that are either state and/or federally listed on public lands under its jurisdiction. To continue protection of existing threatened, endangered, and sensitive plant species while keeping other species from being listed, the State believes that BLM should consider the recommendations noted below.

a. BLM needs to expand the inventory of its lands to identify all existing sites for listed and candidate species, including areas not currently slated for timber sale or harvest. BLM should work with other state and federal agencies to prioritize the study and monitoring of listed and candidate species to best facilitate knowledge of habitat requirements.

b. Prioritized management plans should be developed for special status plants that outline how particular species will be protected, especially those located in land allocations that

L. Road Management. How should BLM districts/resource area manage their road networks to promote compatibility with resource uses.

BLM's western Oregon road system is e valuable component of Oregon's overall transportation network. The road system serves the citizens of Oregon by providing access for timber, fish and wildlife, and watershed management. BLM roads also provide numerous recreational opportunities and are essential for forest fire protection.

Realizing the importance of road management on federal lands, the State developsd a position paper titled, State of Oregon Recommendation on BLM's Road Management Program (Appendix 1). We trust that BLM will consider recommendations presented in this paper when developing its final RMPs/EISs.

The road paper states that BLM should develop comprehensive road management plans. That is, in addition to road maintenance and construction goals and objectives, BLM should address the various resource concerns (i.e., recreational, fish and wildlife, timber, water resources) potentially impacted by roads. These resources are interrelated and road management plans should deal with them in an integrated fashion. Watersheds would be the ideal framework in which to develop road management plans.

BLM districts have inventoried their road networks and recognized the impact that these access routes have on natural resources. The draft plans express a need for eccess management in special areas, critical big game areas, old growth emphasis areas, and other areas. However, there seems to be no action plan to meet these broad objectives.

We commend the Salem District on its recognition that a comprehensive road management plan needs to be developed. They have made a commitment to develop a comprehensive road management plan soon after approval of their RMP.

The following is a brief summary of our recommendations to BLM on road management.

1. The State recommends that BLM continue to aggressively pursue funding for its road management program.

2. The State recommends that a comprehensive road management plan be completed within the framework of the RMP/EIS or shortly after approval of the plans. (Note road management paper for suggested content of management plan.)

3. The State recommends that a maximum 1.5 mile/square mile road density objective (i.e., roads open to vehicular traffic) be instituted for: sensitive watersheds; watersheds

allow timber harvest and domestic grazing. Emphasis should be placed on improving or restoring critical habitats rather than merely maintaining existing often degraded conditions.

c. Long-term monitoring of special status species, especially listed plants, is essential in determining whether plant populations are recovering or declining. Recent advances in technology should be used to develop monitoring program.

d. Maintaining species at the level of minimum viable populations may not be sufficient to guarantee survival over the long-run. It is important to recognize that a minimum viable population is essentially on the brink of catastrophe, therefore, population levels above the minimum are recommended.

BLM districts in general should be complimented on their review of listed and other special status species. These species have been listed in the draft plans. However, the State applauds the recent history of cooperation BLM has shown in promoting the study of many special status species, through joint cost-sharing projects with the Oregon Department of Agriculture and other agencies. Additional comments on special plant species can be found in the Department of Agriculture's response (Appendix 2).

2. Yew Bark

Bark from the Pacific yew tree is a source of taxol which has shown promise in treating certain forms of cancer. BLM in cooperation with the Forest Service is in the process of developing an EIS for managing Pacific yew. Lands have been inventoried to determine the amount of Pacific yew. An interim strategy is being used to guide BLM and the Forest Service on Pacific yew management until the EIS is finalized.

We encourage BLM to carefully follow the interim guidelines for Pacific yew management in order to collect the maximum amount of yew bark feasible from current forest management projects

N. Tribal Concerns. How should BLM districts protect traditional tribal cultural and spiritual sites?

Lands administered by BLM's Klamath Falls Resource Area traditionally were utilized by the Klamath, Modoc and Shasta Tribes. The Siletz and Warm Springs Tribes used lands administered by the Salem BLM District.

The State supports the protection of identified Native American sites sacred to, or of cultural significance to, the various tribes mentioned above. The Tribes' cultural history contributes to the State's heritage and should be protected. BLM should,

through close coordination with the Tribes, act to inventory, evaluate, and protect sites of cultural, religious, and historic value as required by federal law. If such sites are located, BLM should alter its plans in order to protect them, while remaining sensitive to other uses of the lands.

O. Standards and Monitoring. Does BLM have measurable standards and a comprehensive, aggressive monitoring program to determine whether plans meet short and long-term expected future conditions?

The implementation of biological diversity/ecosystem management will mandate comprehensive monitoring programs for each district, including a dedicated funding source in order to evaluate: a) whether the scheduled activities are being implemented as per plan guidance; b) whether the implementation of activities is effective in meeting the expected future conditions; and c) determining if activities are causing the effects identified in the EIS.

Ecosystem management and its effects on resources within the forest environment is a long-term investment. Research monitoring will be necessary in order to effectively manage ecosystem management on the ground. In a sense, ecosystem management is an experiment requiring close evaluation and monitoring of thousands of short-term projects which should lead to the final desired condition.

In order for each RMP and EIS to stand alone and meet the test of public and legal scrutiny, it must include standards followed by a monitoring plan to measure results. Standards must be measurable to be meaningful. There is little purpose in defining standards for which there are no methods for measuring the degree of compliance or attainment. The true judicial litmus test for the final plans, we believe, rests with the standards that must support the resource management direction found within the RMPs.

BLM's draft plans fall short of meeting the State's expectations for adequate standards and comprehensive monitoring plans. Even though the plans note a need to include the three phases of monitoring noted above, implementation seems to be the only element covered in the monitoring sections. As an example, how will the general monitoring questions for socio-economic conditions presented in the draft RMPs surface problems with plan effectiveness?

Other questions BLM should address in their final plans include:

1. Why aren't monitoring standards presented for each land allocation (i.e., Old Growth emphasis areas, General Forest, connectivity areas)?

2. Why haven't the monitoring questions presented in district plans been tied to measurable management standards?

3. Is a threshold level of plus/minus 10 percent appropriate for changes in all resource outputs or inputs to resources?

4. Where are specific, measurable standards found in the districts/resource area monitoring plans?

5. Is there a tie between implementation and effectiveness which is necessary for meeting the expected future condition (e.g., ecosystem management)? Does BLM have a long-range monitoring framework which will direct the agency over the next 100 years in order to meet these expected future conditions?

The State believes that BLM districts/resource area should develop more specific standards and comprehensive monitoring plans. Of special note would be the Forest Service's approach to monitoring effectiveness and validation. We feel that without comprehensive monitoring plans for each district/resource area, RMPS/EISs will not meet the public's expectations and legal challenges that the agency will face.

Annual Program Summary monitoring reports, being proposed by districts, are a positive way to allow the public an opportunity to track and assess the progress districts are making on implementing their plans.

P. Budgets. What budget will BLM districts need to carry out the preferred alternative? How should the districts react if a smaller budget allocation occurs?

BLM districts project a need to increase their budgets in the new plans in order to meet implementation and monitoring requirements. Due to the complexities of the plans and the new biological diversity approach proposed, the State agrees that more money will be needed for training personnel, research, implementation and monitoring.

If funding for intensive management practices under the current plans are any indication of expected future funding, the State is concerned that the new plans may not be implemented. BLM's biological diversity is an experiment in land management which relies on many as yet unproven concepts.

With the uncertainty in past and present funding levels, the State recommends that BLM address the likelihood of funding for proposed actions and the impact of BLM's resources if expected funding does not materialize. This element in and by itself stands between a successful and unsuccessful outcome. Biological

diversity management will require a long-term commitment in funding to test programs and practices which accomplish the expected future conditions.

BLM budgeting should not be necessarily linked to ASQ levels. For example, the State suggests that BLM consider establishing a fund for density management activities in Old Growth Emphasis Areas that is separate from the ASQ derived source available for more traditional harvesting as proposed in the General Forest Management Areas. This approach would institutionally recognize the major goal of Old Growth Emphasis Areas which should be their utility in providing answers to critical wildlife/silvicultural questions through the application of research and monitoring.

III. DRAFT PLANS ORGANIZATION

The State agencies have found BLM's draft Resource Management Plans and Draft Environmental Impact Statements very difficult to review because of the way plans were organized. Some of the issues of concern to readers were:

A. Difficulty in distinguishing the draft RMP from the draft EIS. For example, implementation standards were scattered throughout the documents.

B. Lack of definable links between broad goal statements and specific actions (e.g., standards, guidelines, inventories, monitoring, evaluation).

C. Difficulty in identifying BLM plan policies in the RMPs.

D. Lack of substantiation to support claims of consistency with the plans and policies of other agencies affected by the RMPs.

E. Inadequate/incomplete tables of contents and indexes.

F. Numerous errors in tables and incomplete data.

G. Maps showing land allocations are too small a scale with few reference points to decipher where allocations begin and end.

The State encourages BLM to reorganize their final plans to make them more readable to the public and land managers who will be implementing the final preferred alternatives.

IV. FINAL COMMENTS

The State of Oregon's Final Coordinated Response represents the State's review of the six draft Resource Management Plans and draft Environmental Impact Statements. Twelve state agencies have submitted their recommendations to the Governor's Forest Planning Team for consideration in the development of the coordinated response. Input from six "Open Houses" held around the state this year, public comments on the State's Proposed Coordinated Response, discussions with various interest groups and individuals, and Oregon State University's Report were all considered when developing the State of Oregon's final response.

The State will work with BLM districts and the State Office, between their draft and final, to help them better understand our recommendations presented in this document.

Appendix JJ
Individuals and Organizations Who Responded to the Draft Resource Management Plan

Western Oregon Resource Management Plans Common Comment Synthesis/Partial Responses

Salem District Comments / Responses

Individuals and Organizations Who Responded to the Draft Resource Management Plan

The following individuals and organizations responded to the Salem District Draft Resource Management Plan/ Environmental Impact Statement:

Individuals

Achr, Michael
Adams, A. Angelica
Adams, Barbara
Alexander, Ray
Alexander, Sr., Richard P.
Allard, William
Allaway, David and Linda
Allen, Donna L.
Allen, Ronald R.
Alverson, Ed
Amicarella, Joe
Anderson, Betty C.
Anderson, Garth
Anderson, Lanny
Anderson, Richard
Anderson, Sherman D.
Anderson, Wes
Annin, Frank
Anos, Ronald W.
Apotheker, Steven R.
Applebaker, Daniel
Arthur, Rhea M.
Austin, Steve
Ayers, Louis J.
Baitaglia, C.
Baldwin, Catherine A.
Bare, Nancy
Barendse, John
Barnes, Mike
Bate, Dale
Battaglia, Leonard
Bazarth, Carole A.
Bazor, Larry
Beatty, Lew D.
Beck, Beverly J.
Becker, Barbara
Becker, Jerry
Bedard, Keith S.
Beil, R.A.
Bell, Talley R.
Bennett, Doug
Bentley, Lela B.
Berg, Hank
Bergman, Morris H.
Berkland, John E.
Berlik, Robert A.
Bethell, James
Beyer, Bruce
Billings, Floyd
Billings, Sue
Birch, Darwin L.
Bishop, Dick
Black, Wanda J.
Blair, Robert E.
Blanchard, C. Ralph
Blanchard, Gary W.
Blickensderfer, Rob
Blowers, Joe
Boan, Ray
Boeder, James R.
Boehner, Paul R.
Bolding, WM. H.
Bond, Belle
Bondurant, Edward T.
Borgeson, Mark
Bornholdt, Mariana D.
Bowden, David L.
Bowers, Sue
Bowman, Larry E.
Bowman, Suzanne
Boysen, Larry
Brager, Stephanie
Brandin, Michael G.
Brandis, Kristen
Brandt, Eunice C.
Brandt, Louise Joy
Bridges, D.
Brooks, Terry L.
Brown, Larry
Brown, Richard T.
Brown, William
Brunner, Eberhard
Brusse, Lori S.
Brusse, Tim
Buchanan, Hugh W.
Buche, Harvey W.
Buezynski, Aner
Bunnell, Bernard
Burkholder, Todd
Burleson, Dyrol
Butterfield, Andrew
Byers, Al
Byram, June M.
Calhoun, Glenn
Callaghan, Shirley P.
Canan, Joyce
Carbaugh, Chet
Carbaugh, James C.
Carlson, Ernest F.
Carlson, Priscilla

Carlstrom, A. L.
Carrasco, Josafat G.
Carter, Darrell S.
Carter, Plaze B.
Cavanagh, Ann W.
Chaffin, J. L.
Chapman, Drew
Choate, Donald
Claflin, Cliff
Clark, Dennis
Clark, Jack L.
Clayton, Mark
Cleland, Joanne
Cobb, Larry E.
Coblentz, Phillip D.
Coblentz, Robert
Cody, Denise
Collins, Robert
Comstock, Ronald
Condo, Candis L.
Conley, James H.
Contrenas, Pam
Cook, Harry L.
Cooke, Boyd C.
Cookingham, Craig
Coonrod, V.
Cooper, Chris
Cooper, David L.
Cooper, Kay E.
Corbett, Tony D.
Corence, W.G.
Corkran, Charlotte C.
Corkran, David
Cornell, Jennie L.
Cougre, David
Covington, Donna
Cronwell, Lynn
Crumpacker, M.D., Nancy
Culbertson, Gordon
Cummins, Tyson G.
Cunningham, Terry
Curtis, Mrs. M. Joan
Daniels, Bonnie J.
Daniels, Kent
Daniels, Richard C.
Dart, Edward
Dass, Archie
Davey, Christopher
Davis, Marty
Davis, Michael
Denker, Willow
Denton, Jr., Gerald P.
Devine, Dennis
Diggs, Daniel H.
Dobson, Wanda
Dodge, Larry W.
Donley, Jeromy
Dooley, Jr., Tevis
Doppelt, Bob
Dose, Joseph C.
Dove, Jerry A.
Dryden, Bill
Dudek, Dana
Dueber, Shirley
Duenas, Jose M.
Dulley, Michael
Dunn, R.E.
Dwire, Kate
Earon, Robbie
Elbaum, Daniel
Ely, Ken
Emerson, Mike
Engelen, Ron
Englebert, Dwight
Evans, Larry H.
Evans, Ron
Evanson, Donald H.
Exo, Kaye J.
Fagan, John
Faris, Robert E.
Faulke, Chris C.
Fay, Dorothy A.
Felix, Duane F.
Fenel, Tom
Fennimore, Keith
Ferguson, Dave
Ferris, Herb
Ficker, Ursa
Filson, Tom
Fischer, Raymond H.
Fitzgerald, Harold
Fletcher, David
Flippo, Melvin D.
Flood, Dave
Fluge, Michael Kent
Fobes, Richard
Ford, Lynn S.
Forsythe, Margaret G.
Fosdick, Joel
Foster, Greg
Freed, Judith
Freimark, Robert M.
French, Beverly
French, R. Bruce
Freres, Jr., Robert
Frey, Betty J.
Frey, Gordon
Friesen, Arvis
Fromcke, R.D.
Furbee, Greg
Galasso, Robert
Gallagher, Scott
Garcia, Frank
Gardner, Brian
Garibay, Luis A.
Gass, Jr., Hubert A.
Gatchet, Elmer
Geis, Gretchen
Geisinger, Jim
Gentner, Robert H.
Giamier, Matthew R.
Giesy, Betty
Giesy, Reid
Giesy, Wayne
Gilmore, Larry A.
Girtz, Jr., Henry
Glick, Ed
Goodard, Jr., Melvin
Godsey, Leo
Golden, Rod
Gonez, Juan F.
Good, Michael
Gore, Archie
Gould, Charles
Graimini, Debra
Graves, Sandra
Greacen, Rob Sant
Greene, Sarah E.
Greenip, Mark
Grier, Norma
Griffen, Gary
Groshong, Clyde
Gross, Gene
Groves, Ronald H.
Guinn, Bob
Gurney, Aaron
Guth, Candice
Hager, Ronda L.
Hall, Edward
Hall, Frank
Hall, M.D., Clifford A.
Hamilton, Steph C.
Hamlin, Cecil E.
Hamlin, Charles E.
Hammond, John L.
Hansen, Greg
Haram, Gerald
Harbison, Paul B.
Hargitt, Joel M.
Harrington, Michael
Harris, Edward C.
Harris, Tom
Harsham, John L.
Haslett, Dale
Haslett, Loleta
Hawkins, Jr., Glen F.
Hebisen, Mark J.
Hefley, Glenna
Heiken, Doug
Heimuler, Dale B.
Hemelek, John

Hendrix, Fred A.
Hepler, Eric
Hernandez, Doug
Hernandez, Fidel
Hernandez, Irma R.
Hernandez, Roberto
Herzberg, Lee
Hessel, Lori
Higgins, PH.D., Dennis V.
Hill, Larry W.
Himes, John
Hoagland, Larry
Hoefling, Pam
Hoffmann, Dieter
Holce, Wilford E.
Holder, Terry
Holt, Jim
Homann, Lora G.
Hopper, Edwin A.
Horn, S. R.
Horning, George E.
Horvath, Eric
Hostetter, Robert D.
Houston, Dan
Howell, Philip
Hubbard, Mark
Huber, James E.
Huber, Jeffrey S.
Hughes, Roy H.
Hulscher, Deborah
Hultberg, Devona
Hunt, Lee O.
Hutchins, Grant M.
Hyatt, Harold
Irwin, Larry L.
Irwin, Tab W.
Isam, Bobbi
Ivanoff, David E.
James, Frank
James, Jim
James, Jim A.
Jenson, Marvin
Jitenburo, Aimon
Johnson, Ben
Johnson, Cliff
Johnson, James J.
Johnson, Larry
Johnson, Phillip M.
Johnston, Linda K.
Johnston, Robert B.
Johnstone, Jimmy P.
Jones, Delna
Jones, Judy
Jones, M.
Jorgensen, Robert G.
Kaiser, Stan
Kale, Dr. Keith
Kapstein, Brian
Kauffman, Klp
Kaye, Aileen P.
Keep, Scott R.
Kelly, Craig
Kelly, Kent S.
Kenline, Carla
Kenline Shawn
Kershaw, J.
Ketcham, Chris
Ketcham, Paul
Keyser, Glen
Kieft, Dan
Kimzey, Louis
King, Dan
King, Inge
King, Michael R.
King, Ron
Kinney, Gisela
Kirk, Phyllis
Kish, Gary
Klips, Abigail
Knox, Roger
Koch, Daniel E.
Koos, John E.
Kraechenko, Anatoly
Kraxberger, Duane J.
Krebs, Ronald
Krosman, Albert
Kujala, Jeff
Kundert, Ralph V.
Kzaochenko, Sergei
Lacoste, Kenneth
Lacy, Robbin
Lafontaine, Lee
Lail, Donald G.
Lake, Lynn
Lambert, Robert L.
Lang, Bill
Lang, J.
Langlois, Edward
Larkin, Dan
Larson, David
Layman, Ray E.
Lee, Arlene
Leppin, Art
Lewey, Frank
Lewis, Julie
Light, Bill
Linglebach, John
Linhart, Louis J.
Linville, Peggy
Littlejohn, Gary
Liverman, Marc
Livingston, Charles
Loback, Jack
Lohnes, Jonathan
Love, H. Robert
Lowe, John E.
Lulay, Don
Lundeen, Teresa J.
Lundmark, Greagor K.
Lusk, Shirley
Lusteneo, Andy P.
Lytle, Dee
Mabry, J.
Machado, Craig
Macklin, Robert L.
Madias, Michael
Mahon, Robert
Maltsberger, Josh
Manning, Tollie R.
Manuel, John
Marcus, Lew
Marsh, Donna
Marsh, Norm
Martin, Almos F.
Martin, Bradford J.
Martin, Lester F.
Masters, James
Maxey, Rhonda S.
Maynard, Larry
Maynard, Robert L.
McBeth, Sr., Curt
McCallister, Tim
McCanna, Jemae L.
McCauley, James E.
McClellan, Chris
McClellan, James J.
McClellan, Thomas D.
McClure, Janet L.
McClure, Jim
McCollunn, Pat
McCormick, Charlie
McCracken, Joseph W.
McEneay, Jeny
McGhehey, John
McGinnis, Michael O.
McGraw, Deborah
McGuire, Glen J.
McGurrin, Joseph
McHary, Janet
McKeel, John
McKellar, Robert H.
McKenzie, Katheryne E.
McMullan, Darrel
McVay, Rocky
Mead, Ronald H.
Melendez, Esteban
Mench, Don
Mendenhall, Nick
Mercier, Michelle
Merrifield, Kathy
Metcalf, Roger

Meurer, Chris
Mickelson, Scott
Miller, Bo
Miller, Gerald
Miller, Joseph L.
Miller, Lee E.
Miller, Mark
Mills, Allen
Mills, Dennis I.
Miner, Jack
Minle, Mitch
Mitchell, Jerry
Mohr, Brian
Mohr, Michael
Moore, Helen
Moore, Murrell
Moore, Zephyr
Moore, Jr., James F.
Morehead, Roland J.
Morris, Loren
Morris, Mary
Morris, Virgil
Morse, Rollin E.
Mortenson, Paul
Morthland, D. W.
Muir, M. D., Warner R.
Mullen, Nita
Munroe, Thomas C.
Muntz, Charla
Nelson, Donald P.
Nelson, George G.
Newbold, Robert F.
Newland, C. E.
Nicholls, Jack
Nicholson, Sharon L.
Nicklous, Randy
Nisbet, Robert A.
Nixon, Earl
Noble, Jerome L.
Noble, Synthia
Norberg, John R.
Nord, Timothy A.
Nordstrom, Lars
Nystrom, Amy
Nystrom, Todd
O'Brien, Robert
O'Connor, Winifred E.
O'Dell, Ronald
O'Neill, John
O'Shea, Clare E.
Oakes, K. William
Oglesbee, Devin
Olsofka, Anne
Orr, Paul O.
Ort, Dan
Orton, Shane
Osborne, Donald A.
Ostertag, George
Owre, Jess
Parchman, Mary C.
Parker, Todd
Parren, Jr., Robert
Parsons, Jerry
Parsons, Rick
Parsons, Tom
Payne, Mike
Pedder, Genevieve
Pedder, Sr., Harold
Pelletier, Mike
Pelletier, Robert
Peoples, Thelma
Percell, Gary
Perry, David
Petersen, David J.
Petersen, Greg L.
Peterson, Donna M.
Peterson, Everett
Peterson, Gene
Peterson, Linda J.
Peterson, Nancy
Petrequin, Erin
Phelan, Jeanette
Phillips, Julie
Phillips, Mark E.
Phillips, Vicki
Pickens, Penny
Pierce, Lona
Pillow, Mrs. L.
Pio, Ron
Plaisance, Jean M.
Poddar, Bhagwati
Pointer, Sr., James R.
Pollock, Doug
Posekany, Dick
Potts, Reuben L.
Powell, Maurine K.
Powne, Bob
Pratt, Robert W.
Primbs, K.C.
Procarione, Richard
Pugh, Dean
Pugh, Eleanor A.
Puls, Chris
Purvis, Robert C.
Quinn, David
Rainwater, Brian
Rana, Avis
Randall, Mike
Rasmussen, Dana A.
Ray, Richard A.
Redington, Robert A.
Reisch, Dixie M.
Rendar, Byron
Renoud, Dick
Richard, Paul
Richardson, Bruce
Ricohermoso, Eric
Roberts, Barbara
Robertson, Gratia
Robison, David
Rogers, Wilma
Romans, Roger
Rose, B. L.
Ross, Chris V.
Ross, J.
Roth, Christopher N.
Rowe, Blake S.
Rowley, Phil
Rummel, Robert E.
Runion, M. Gene
Runyon, B. N.
Rupers, Barbara
Russo, Ronald J.
Sacher, Art
Sallak, William F.
Salvino, Michael D.
Sanchez, Medardo
Sanders, Johnnie E.
Sapp, Russ
Sawyer, Lee
Scatterday, Glen A.
Schact, Lacretia C.
Schaffer, A. G.
Schenck, Franklin Z.
Scheusner, Roger
Schindler, Paul P.
Schmid, Leeroy J.
Schmidt, J. Melvin
Schmidt, Mandy Cole
Schneider, Douglas A.
Schnelter, Wanda
Schumaker, Matthew
Scott, Henry D.
Searle, Mike
Sedlak, Jerry
Sehilke, Debbie
Seiber, Darrel
Seipert, Scott
Shaffer, Mike
Shaffer, Paul
Shambo, WM.
Sharp, D. E.

Shaw, Christy
Shaw, Richard V.
Sheets, William D.
Sheffer, Russell M.
Shepard, Rod
Sherman, Fred
Shiolas, Tom
Shipley, Avery
Shrader, W.R.
Shroyer, Jr., George
Silovsky, Gene D.
Singleton, Henry
Sinkin, Larry
Skidmore, R.
Sloan, Bob
Slupp, Don
Smith, Clifton T.
Smith, Dwayne
Smith, Ervan B.
Smith, Fred
Smith, Fred C.
Smith, Karen L.
Smith, Rena C.
Smith, Thomas
Smith, Thomas A.
Smith, Waldo
Snedigar, Bobbie
Snider, Kile E.
Sommers, Kathy
Sparks, Billie
Sparks, Jerry G.
Spears, Glenn
Spero, Johnathan
Springer, Donna
Springer, Gary
St. John, Emily
Stark, Carol
Steadman, Charles T. W.
Steele, Ray
Steinbacher, Robert A.
Stellflug, Susan
Stensrud, Charles A.
Stevens, Martin
Stewart, Jeff
Stolsig, John A.
Stonehocker, Tom
Stonex, Richard G.
Stout, B.B.
Stout, Floyd M.
Strawn, Kim
Streeker, Steve
Stross, Barbara
Sturges, Reyntha O.
Sutherland, Bill
Svoboda, Milan
Swanson, John
Swindells, William
Sylvester, Ron
Syrowski, Richard
Tapp, Chris
Tate, Jeffrey A.
Taylor, Steven R.
Tejada-Flores, Miguel
Tempel, M. D., Patrick C.
Terry, Steve
Thomas, John
Thornton, Cliff
Tichenor, Steven
Timms, Gene
Tingley, Emma
Todd, Wes
Tolman, Beverly
Touhey, Charlotte
Truax, Bill
Tuma, Joe
Turner, Dr. David P.
Turner, James D.
Turner, W. E.
Turpin, Melvin W.
Unquera, John
Van Vo, Vinh
Vander Schaaf, Dick
Vanderback, Wilbur
VanLeeuwen, Rep. Liz
Varley, Tom
Vaughn, Ronald
Vermouth, Jon
Verser, Mike
Vigue, Charlie
Vincent, David
Vinton, Jason
Volz, Leroy J.
Von, Darrel
Vonbergen, W. R.
Voncannon, Mike
Voytek, Bernie
Voytek, Robert J.
Waldron, David
Wall, Carolyn
Walters, Melvin
Ward, Joya
Warner, Dean A.
Warren, Robin
Waters, Joan
Webb, Steve
Weber, John W.
Weeke, Charles A.
Weinburg, Dennis
Welch, Barry R.
Wells, Vern L.
Wennstrom, Jerry
West, David M.
Wheeler, Floyd
Wheeler, Jason
White, Donald Paul
White, Gayle
Whitehead, Ron
Whitloin, Richard
Whitlow, Ellis
Whitten, Noyes
Widman, Bill
Wiedeman, Michael W.
Willer, Chuck
Williams, Daniel
Williams, Donald H.
Williams, George W.
Williams, King
Williams, Mitch
Wilson, David H.
Wilson, Esther
Wilson, Katherine
Wilson, Keith
Wilton, Bryan A.
Winans, Linn
Winslow, Jim
Winters, Sam
Wischnofske, Bill
Wischnofske, John
Wise, Stacy
Wistar, Gil
Witt, Bradley K.
Wodicka, Kristina
Wohlers, Mildred
Wolf, Mike
Wolf, Thomas M.
Wonderling, Darwin
Wooley, Joyce
Wootan, Ross
Wright, Bruce
Wright, Patrick D.
Wright, Steven L.
Wroncy, Jan
Wyscaver, Elden
Yazzolino, Brad
York, Cary
Young, Richard
Youngberg, Bill
Younger, Glenn
Zabo, Russell
Zahn, E.
Zika, Peter F.

Organizations

Alsea Tree Farm
Alsea Valley Alliance
American Fisheries Society
Applegate Roughriders
Associated Oregon Loggers
Association of O&C Counties
Audubon Society of Corvallis
Audubon Society of Portland
Benton County Board of Commissioners
Tillamook County Board of Commissioners
Boise Cascade
Boise Cascade Timber and Wood Products Division
Brazier Forest Industries
Chemeketans
Citizens Natural Resource Group
City Council, City of Drain
City of Salem
Clackamas County Board of Commissioners
Coast Range Association
Columbia County Board of Commissioners
Defenders of Wildlife
Diamond B Lumber Company
Environmental Protection Agency, Region 10
Forest Resource Services
Forestry Sciences Laboratory
Freres Lumber Co., Inc.
Friends of the Sandy River
Hampton Tree Farms, Inc.
Hull-Oakes Lumber Company
Linn County Board of Commissioners
Linn County Parks and Recreation Department
Linn County Tourism Coalition
Longview Fibre Company
Mary's Peak Alliance
Mazamas
McMinnville Water and Light
Miller Timber Services
Mt. Hood Corridor Community Planning Organization
National Wildlife Federation
Native Plant Society of Oregon
NCASI
North Coast Chapter NPSO
Northwest Forest Resource Council
Northwest Coalition for Alternatives to Pesticides
Office of the Governor
Oregon House of Representatives
Oregon Legislature
Oregon AFL-CIO
Oregon Forest Products Transportation Association
Oregon Logging Conference
Oregon Mycological Society
Oregon Natural Resources Council
Oregon Raptor Center Inc.
Oregon State Senate
Pacific Northwest Four Wheel Drive Association
Public Lands Foundation
Salem District Advisory Council
Sierra Club, Columbia Group
Siuslaw Timber Operators Association
Southern Oregon State College
Starker Forest, Inc.
The Nature Conservancy, Oregon Field Office
The Pacific Rivers Council
The Wilderness Society
The Wildlife Society, Oregon Chapter
Tillamook County Board of Commissioners
Timber By Products, Inc.
Timberline Ski School
Trout Unlimited
Tualatin Valley Chapter of Trout Unlimited
U.S. Bureau of Mines
U.S. Fish and Wildlife Service
U.S. Forest Service
West Oregon Timber Supporters
Western Forest Industries Association
Weyerhaeuser
Whitten Logging Company
Wildlife Too
Willamette Industries, Inc.
Willamette Industries, Philomath Division
Willamette Timbermen Association, Inc.

Western Oregon Resource Management Plans
Common Comment Synthesis/Partial Responses

Table of Contents

Western Oregon Resource Management Plans - Common Comment Synthesis/Partial Responses

Many of the comments on the adequacy of the Draft RMP/EIS addressed specific elements of the preferred alternative that are no longer components of the proposed plan. Where the proposed plan had a corollary element, our responses to such comments treated them as if they applied to the corollary allocation. The most common example is comments on Old Growth Emphasis Areas. Our responses to those comments treat them as applying to Late Successional Reserves in the proposed plan (PRMP).

The acronym "SEIS", used in comment responses, refers to the 1993 *Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl.* The term "FEMAT report" refers to the 1993 Report of the Forest Ecosystem Management Assessment Team, titled *Forest Ecosystem Management: An Ecological, Economic and Social Assessment.*

Scoping

COMMENT: The BLM and State of Oregon should convene an independent commission to study the specific ecological and administrative problems arising from the current ownership pattern.

RESPONSE: *Funding for such an initiative would have to be authorized by the Congress and the state legislature. Such a proposal is beyond the scope of the RMP.*

State Director Guidance

COMMENT: The State Director Guidance for the planning process should be amended to permit changes in the preferred alternative.

RESPONSE: *The State Director Guidance, which was issued through a series of instruction memos during the years 1988 through 1992, did not directly address the formulation of the preferred alternative, and did not preclude changes in that alternative. The state director never intended it to formally guide that aspect of the process and it did not direct any discretionary allocations or constraints in the preferred alternative. It has also not guided development of the PRMP.*

Purpose and Need

COMMENT: The RMP/EIS should acknowledge the purpose of the O&C Lands, which is to be managed for the stability of local communities and industries through the production of timber, under the principles of sustained yield, and should also reference important related judicial decisions.

RESPONSE: *Chapter 1 has been expanded, but citation of specific judicial decisions seems unnecessary to the function of the RMP.*

COMMENT: The documents never spell out clearly what decisions will be made as a result of this analysis.

RESPONSE: *The chapter 1 discussion, Planning Process and Criteria, refers to Appendix D which lists the major questions to be addressed through planning. The answers to these questions will be the decisions.*

Budget Assumptions

COMMENT: The Draft RMP does not include a cost analysis of the Alternatives. It should include costs of all aspects of timber sales, such items as road building, sale preparation, monitoring, site cleanup, mitigation of environmental impacts and restoration. Higher management costs would undoubtedly occur if the Preferred Alternative were adopted.

RESPONSE: *Ecosystem management focuses on the many activities required to manage a specific geographic area. This type of management is different from traditional program-based management which focuses on costs and units of accomplishments in each individual program. For this reason cost comparison is limited to comparison of the total costs of the No Action alternative and the PRMP (See chapter 2, Costs of Management).*

COMMENT: Consider the unstable nature of federal funding of forest management activities and the difficulties of securing this funding.

RESPONSE: *The introduction to chapter 4 has been modified to acknowledge this.*

COMMENT: How does BLM expect to obtain funding to implement ecosystem management with reduced harvest levels and higher predicted costs?

RESPONSE: *We expect the Congress will be able to look beyond the traditional measure of timber sales, understand the importance of ecosystem management, and appropriate adequate funding for its successful implementation.*

COMMENT: Evaluate the impact of lower funding levels on programs and outputs, including mitigation and monitoring. How will accountability for funding mitigation and monitoring support be verified?.

RESPONSE: *Since the essence of ecosystem management is balance, reduced funding levels would affect all programs and outputs proportionally. Mitigation and monitoring are considered to be part and parcel of timber sale and other implementation costs. In the priority setting process, managers will ensure the integrity of program balance, including mitigation and monitoring in the budget.*

COMMENT: Review historic silvicultural plans, required budgets, approved budgets, activities conducted, and reasons for the differences.

RESPONSE: Much of what is requested demands an analysis of political decisions made at high levels of past administrations and/or during legislative deliberations in Congress. Although the analysis would make an interesting if lengthy article, we believe it would suggest little about how such deliberations and decisions will come out in the 1990s.

Organization of Document, Editing and Maps

COMMENT: It was difficult to distinguish the draft RMP from the draft EIS. For example, implementation standards were scattered throughout the document.

RESPONSE: *Chapter 2 has been reformatted to clearly display proposed objectives and link them to management direction for each resource.*

COMMENT: Avoidance of acronyms would make the document more readable.

RESPONSE: *The use of acronyms has been reduced.*

COMMENT: On the maps more geographic places and towns should be shown and named, more streams named, and secondary roads indicated.

RESPONSE: *The level of detail of geographic naming was limited so as not to clutter the maps.*

COMMENT: Maps showing land allocations are too small a scale with few reference points.

RESPONSE: *A reference grid has been added to the new PRMP maps. The scale for PRMP maps is enlarged and is considered adequate for an environmental impact statement. For more detail, see maps available for review in the district office.*

Planning Schedule

COMMENT: The final RMP/EIS and Record of Decision should not be completed before completion of Endangered Species Act consultation.

RESPONSE: *We consider consultation on our resource management plan already accomplished by the consultation and resultant biological opinion from the Fish and Wildlife Service on the SEIS. Additional consultation will occur as project planning follows the resource management plan.*

COMMENT: The deficiencies of the draft plan warrant BLM developing a revised or supplemental draft before proceeding to the final stage.

RESPONSE: *BLM, with the Forest Service, prepared a Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (SEIS).*

Coordination with Other Parties

COMMENT: If other federal lands are the key to success of an alternative, identify the related coordination and cooperation planned.

RESPONSE: *Such coordination is addressed in the SEIS Record of Decision.*

COMMENT: The Confederated Tribes should be contacted for review of any activity permanently altering the land, minerals, vegetation on, or access to their aboriginal lands. The tribal office should receive copies of environmental assessments, FONSIs, EISs, and other notifications of actions.

RESPONSE: *Memoranda of understanding, currently under development with tribal governments, will identify which official BLM documents they should receive.*

Goals and Objectives

COMMENT: It was difficult to identify plan policies in the RMPs. The RMPs should identify the expected future condition.

RESPONSE: *Explicit PRMP objectives have been added for each topic in Chapter 2, to address these concerns.*

COMMENT: There should be a stronger link between the plan's broad goals and the specific actions that will be undertaken. In general, standards and guidelines need to be established.

RESPONSE: *The objectives that have been added for the PRMP provide that link and, along with management actions/direction, equate to standards and guidelines.*

The Preferred Alternative

COMMENT: A table showing the acreage in each land classification would help the reader determine the significance of restricted areas.

RESPONSE: *Allocations overlap so any table oversimplifies. A table, however, has been included in appendix BB.*

COMMENT: The RMP should use a watershed approach to land resource management.

RESPONSE: *The SEIS decision, which has been incorporated into our PRMP, details a four tier approach to land resource management: regional, physiographic or river basin, watershed, and site-specific or project level. Under this approach, analysis starts at the watershed level. The planning units will be physiographic province or*

river basin, consisting of a number of watersheds. Watershed-based planning will be implemented and, over time, the federal agencies including the BLM will switch from existing planning units to the provinces or modify the boundaries of current planning units to be more compatible with the watershed-based approach.

COMMENT: BLM's long-term projections are unreliable due to the vagaries of time and changing political and economic agendas. Adoption of any alternative should be a short-term action only.

RESPONSE: *We recognize that the plan adopted will be replaced by another plan within 10 years or so. Yet, only in the long term can we attain many of the plan's key objectives, so much of the plan's focus remains long term.*

Legal Consistency of Preferred Alternative

COMMENT: The draft plans have not explained how ecosystem management in the preferred alternatives is consistent with BLM's legal mandate for O&C/CBWR lands, including its community stability requirement.

RESPONSE: *The SEIS Record of Decision addresses this, and discussion has been added to chapter 2, Purpose and Need, of this PRMP/FEIS.*

COMMENT: The preferred alternative makes timber production the residual rather than the dominant use, because lands are first set aside for riparian and other uses, and the residual land is further managed for old growth restoration. This subservient position for timber violates the O&C Act.

RESPONSE: *Management of these lands under the O&C Act mandate to provide a sustainable level of timber production must also be reconciled with other laws such as the Endangered Species Act and the Clean Water Act. The need of the local communities and industry for a stable timber supply is certainly of foremost concern in the management decisions for the O&C lands. The selection of the preferred alternative or PRMP is our attempt to manage the O&C lands in a responsible manner. Such management is intended to allow as high a level of sustainable timber supply as possible without risking further drastic curtailments in the timber supply in the future due to the requirements of myriad other laws through which the BLM must chart its course. The mechanical PSQ calculation hierarchy may make it appear that timber production was the last concern in the decision-making process. This does not mean, however,that it was subsidiary to other uses of the timber lands.*

COMMENT: Since the Alternative A level of riparian protection meets legal requirements, selection of that level of riparian protection would be most consistent with the O&C Act.

RESPONSE: *The level of riparian protection included in the PRMP was selected not only to meet current legal requirements, but also to promote the goals of watershed protection contained in the O&C Act and to provide sufficient protection to reduce the potential for listing of aquatic species as threatened or endangered. Taking into consideration the anticipated benefits to the quality of watersheds in the O&C Act, it does not necessarily follow that the alternative with the least riparian protection allowed by law is the "most consistent with the O&C Act."*

COMMENT: Lowering the minimum harvest age by releasing arbitrary constraints on it would seem to be most consistent with the O&C Act, particularly considering the difficult timber supply situation.

RESPONSE: *While the O&C Act does not set "arbitrary constraints" one way or the other about the rotation age or minimum harvest age of the timber, the purposes of the O&C Act in providing a long term sustainable timber supply may be adversely affected by lowering the minimum harvest age. The level of sustainable harvest over the long term could be reduced if the minimum harvest age is significantly lowered below the age of the culmination of mean annual increment. Intensifying harvest activities of the lands included in the GFMA by lowering the minimum harvest age could also have adverse effects on the quality of watersheds on the O&C lands. Such results cannot be considered as "most consistent with the O&C Act."*

The environmental impacts of harvesting much younger trees must also be considered. Lowering the minimum harvest age in the GFMA could have significant adverse impacts on the ability of protected species such as the northern spotted owl to disperse throughout their range, and possibly cause the BLM to violate the Endangered Species Act.

COMMENT: The exclusion of O&C forest land from exchange for lands to be managed for single use management purposes relative to listed species appears to conflict with Section 7(a)(1) of the Endangered Species Act.

RESPONSE: *Congress in Section 7(a)(1) did not direct the Secretary to ignore the limitations in statutory authorities for other Interior programs when it directed the Secretary to use these authorities to further the purposes of the Endangered Species Act. The O&C Act requires those lands to be primarily managed for timber. The BLM would violate its statutory authority under the O&C Act for the management of these lands if we were to exchange O&C timberlands for property intended for use primarily as wildlife habitat. See Headwaters v. BLM, 914 F.2d 1174 (9th Cir., 1990). Thus, the proposal to exclude the O&C lands from exchanges for lands intended for purposes other than multiple use does not conflict with the promotion of conservation of listed species under §7(a)(1), since that section does not require agencies to violate their existing statutory authorities to accomplish its purposes.*

The No Action Alternative

COMMENT: The No Action alternative should be no activities.

RESPONSE: *It is well established that in land use plan EISs by federal land management agencies, the No Action alternative is a continuation of the existing plan. According to the Council on Environmental Quality in an action updating a land management plan where an ongoing program under existing legislation is taking place, the "no action" alternative is the alternative of "no change" from current management direction or level of management intensity. "To construct an alternative that is based on no management at all would be a useless academic exercise." (Answer to Question 3 of CEQ's "NEPA's Forty Most Asked Questions", 46 Fed. Reg. 18026 (Mar. 23, 1981), as amended.)*

COMMENT: Note the current level of survey, monitoring and inventory which is done regularly.

RESPONSE: *Monitoring under the current plan is described in Oregon State Office Manual handbook H-1734-1, 162 pages long. Survey and inventory procedures are equally detailed, by resource. Copies of these procedures are available for review in the Salem district office.*

New Alternative Proposals

COMMENT: Assess alternative harvest priorities that maintain more options for the "old growth" in the GFMA. Include alternatives that rely more on partial cuttings.

RESPONSE: *PRMP harvest priorities in the GFMA have been prorated so most old growth there would be intact after the first decade. Partial cuttings (including thinning and density management) have been incorporated into the PRMP to the extent consistent with ecosystem management and timber management objectives.*

COMMENT: It is recommended that BLM add a fisheries emphasis alternative. It would be based on the Alternatives for Management of Late Successional Forests in the Pacific Northwest.

RESPONSE: *An integral component of the PRMP is fisheries emphasis.*

COMMENT: Evaluate the effects of longer rotations and higher minimum harvest ages on all lands administered by BLM.

RESPONSE: *Sensitivity analysis of Alternative B in the Draft RMP/EIS looked at 150-year rotations. Sensitivity analysis of the draft PA looked at no harvest below culmination of mean annual increment.*

COMMENT: Develop and analyze other alternatives which retain biologically significant old growth stands while still producing economic opportunities.

RESPONSE: *Alternatives C, D and E and the PRMP, and all other alternatives analyzed in the recent SEIS, all do this to varying degrees. We do not believe adding more such alternatives would be particularly useful.*

Impact Analysis Generally

COMMENT: A 10-year short-term impact time frame is not equally appropriate for all resource categories. Consider varying according to the life spans of affected biota.

RESPONSE: *The 10-year period was selected as the end of the period before the RMP is most likely to be revised. Keying to the life spans of affected biota is more relevant to a project EIS, such as for a dam or oil and gas leasing. Where available information suggest that intermediate term impact conclusions would be substantially different than the trend implied by short-term and long-term conclusions, that has been acknowledged.*

COMMENT: Assess spatial feasibility of the harvest plan in future decades.

RESPONSE: *A major constraint on spatial feasibility in BLM's checkerboard ownership pattern is harvest activity on other ownerships, particularly private land. Future harvests on private lands are often not the subject of long-term plans, often proprietary even if plans exist, and subject to rapid change due to market conditions, changes in ownership and other business considerations. Even spatial feasibility of the 10-year scenario is speculative, given these considerations, and must be revisited during annual timber sale planning. The elaborate exercise entailed in extending the 10-year scenario out several decades would prove little.*

COMMENT: In some parts of the document, private lands are excluded from consideration, while in others BLM appears to be using private lands for mitigation.

RESPONSE: *In no case does BLM suggest that it can control activities on private lands, except for the indirect control that may occur where specific access across BLM-administered land may be denied due to overriding environmental constraints such as the Endangered Species Act. Expected management on private land, however, is sometime cited as providing certain consequences, for example, adequate elk forage.*

COMMENT: Identify where private land management is hindering the achievement of ecological objectives.

RESPONSE: *Our assumption is that all private forest management, whatever it is today, may become short-rotation intensive forest management. That is the basis for all cumulative effects analysis. BLM's ecological objectives reflect that assumption.*

COMMENT: Soil erosion, watershed degradation, stream sedimentation and forest habitat destruction must all be analyzed with adjacent lands factored in.

RESPONSE: *Soil erosion (soil loss as distinguished from stream sedimentation) is a site specific concern; cumulative effects of soil loss with other ownerships are not relevant to BLM's management decision. The balance of these concerns are addressed broadly in the EIS and will be more specifically addressed in watershed analyses.*

COMMENT: Consideration for catastrophic loss should be factored into the plans.

RESPONSE: *Projections of catastrophic loss have been explicitly factored into the proposed PSQ and into analysis of effects on old growth. Adaptive management will address the locally unpredictable dimensions of catastrophic losses.*

COMMENT: BLM has not done a risk analysis and developed contingency plans for OGEAs and CAs that potentially could be destroyed by a catastrophic event.

RESPONSE: *As is discussed in Appendix O of A Conservation Strategy for the Northern Spotted Owl (USFWS 1990), the original habitat conservation areas suggested in that document were distributed so as to hedge against catastrophes that could cause regional but not total extinction of the spotted owl. The late-successional reserve system is similar. The Draft Recovery Plan and the SEIS both specifically address catastrophic loss of habitat. The dispersal of connectivity diversity blocks will also function as a hedge against major ecosystem impacts from catastrophic events. Risk analysis was incorporated into the regional SEIS. Contingency planning would have to be based on a multiplicity of "what ifs." We consider it more relevant to adapt our management as appropriate after a specific catastrophic event occurs.*

COMMENT: The environmental costs of relying on foreign, non-sustainable resources for forest products has been overlooked. The plan also ignores the other environmental costs -- higher energy consumption, increased CO_2 emissions, accelerated depletion of nonrenewable resources -- of relying more on substitute building materials

RESPONSE: *Assessment of the environmental costs of substitute sources of timber or substitute building materials would entail much conjecture about international markets and is beyond the scope of a single Resource Management Plan EIS. We are aware, however, of some regionwide analyses of this topic, and discussion of them has been added to chapter 4, Socioeconomic Conditions.*

COMMENT: Identify the economic, recreational, commercial and aesthetic values of key wildlife groups or species.

RESPONSE: *Recreation and aesthetic values are not distinguishable and are incorporated in the EIS sections on recreation. Stratification of values by key wildlife group or species is not practical due to lack of consistent, comparable sets of data. Some economic and commercial values of game animals and fisheries have been indirectly captured through the analysis of recreation-dependent and fisheries-dependent personal income and employment. We recognize that these analyses do not capture all of the values associated with key wildlife groups or species.*

COMMENT: Wildlife tree retention causes increased operational costs and safety risks, which have not been adequately analyzed.

RESPONSE: *In the PRMP, a series of stand structural classes have been designed to meet a variety of resource management objectives and to produce stands with desired characteristics over time. An integral part of the structural class is retention of snags and green trees. Worker safety would not be compromised to achieve resource management objectives. Retention of snags and green trees for wildlife or other objectives does increase operational costs as compared to the complete harvest of stands. However, average costs for snag and green tree retention under the PRMP would not be expected to be much different than costs required to complete shelterwoods, perform overstory removals and partial cut harvests while retaining wildlife trees under the plan for the 1980s.*

COMMENT: Identify the cultural and subsistence needs of Indian tribes or nations and how well the preferred alternative meets these needs.

RESPONSE: *The identification of the "cultural and subsistence needs of Indian tribes or nations" at any point in time is a difficult undertaking. Each tribe or nation may define these needs quite differently. These needs change over time as does the situation in which Indian tribes or nations find themselves.*

We intend to take the needs of Indian tribes or nations into consideration. However, the identification of these needs is of necessity a shared responsibility. Therefore, we and the tribes must jointly develop a process whereby information concerning the interests and needs of each tribe or nation is shared. The Memorandum(s) of Understanding presently in development with the Confederated Tribes of the Siletz, Grand Ronde, Warm Springs, Coos Bay, Lower Umpqua and Siuslaw constitute(s) an important step in this process of information sharing.

COMMENT: If helicopter use is an option for accessing and harvesting timber sales, include a discussion of noise impacts.

RESPONSE: *Discussion has been added in chapter 4, Rural Interface Areas.*

COMMENT: Effects of insects and diseases, other than on timber production, are hardly mentioned.

RESPONSE: *Discussions of forest health have been added to chapters 3 and 4, Biological Diversity and Ecological Health.*

Air Resources

COMMENT: Ten years is not an appropriate time frame for assessing effects to air quality. At a minimum short-term air quality impacts should be analyzed under the shortest practicable period of time related to the implementation of specific activities.

RESPONSE: *The short-term air quality impacts identified are actually average annual impacts throughout the 10-year forecast period.*

COMMENT: Statements that air quality management will be in compliance with applicable laws and regulations do not inform the decision maker or the public of how the District will be in compliance and the projected impacts of prescribed fire emissions.

RESPONSE: *Chapter 2 has been revised.*

COMMENT: Various terms, such as nonattainment and designated areas, are used in the text without definition. These terms must be understandable by the public, and must be used consistently between Districts.

RESPONSE: *These terms are included in the glossary.*

COMMENT: Smoke sensitive areas on the maps need to be labelled, and each district plan should identify which areas are most likely to be affected by that district's prescribed fire activities. This discussion should also include why each areas has been designated.

RESPONSE: *The air quality discussions have been revised.*

COMMENT: The final RMP should discuss all the applicable regulatory and/or permit requirements, including National Ambient Air Quality Standards, Prevention of Significant Deterioration, and visibility impairment in Class I areas. The Oregon Smoke Management Plan also needs to be fully described, as well as its relationship to the State Implementation Plan.

RESPONSE: *Chapter 3 has been revised.*

COMMENT: The Draft RMPs include reference to the BLM's smoke surveillance for intrusions. What is this, what does it measure, and how are intrusions reported? What are the District's contributions to reported intrusions? What further monitoring standards and methods will the BLM use to measure compliance with the Clean Air Act and State Implementation Plan standards?

RESPONSE: *The air quality discussions have been revised.*

COMMENT: The Draft RMP assumes uniform burning conditions across the District. These differences need to be fully disclosed in the Final RMP.

RESPONSE: *The air quality discussions have been revised. Additional consideration of these differences are more appropriately addressed at the watershed or province planning levels, as identified in the SEIS. Fire management plans completed at those levels will include methods most appropriate for their specific geographic areas.*

COMMENT: A more complete comparison is needed between regulated pollutants and expected emissions, especially PM_{10}.

RESPONSE: *The air quality section of chapter 3 has been revised.*

COMMENT: The types of use of prescribed fire in the RMP need to be identified and fully discussed. Particularly, the dispersion conditions of low-intensity fire need to be discussed along with potential impacts to air quality.

RESPONSE: *The air quality discussions have been revised.*

COMMENT: More thorough analysis of emission reduction techniques and alternatives to the use of prescribed fire is necessary in the Final RMP.

RESPONSE: *The air quality discussions have been revised.*

COMMENT: The Final RMP needs to disclose potential impacts to persons in the Rural Interface Areas.

RESPONSE: *The air quality section, chapter 4, has been revised.*

COMMENT: The analysis needs to include consideration of more complete utilization of slash materials as an alternative to broadcast burning.

RESPONSE: *The air quality discussions have been revised.*

COMMENT: The Final RMP needs a discussion on the decision process of using prescribed fire.

RESPONSE: *Chapter 2 has been revised. Additional rationale can be found in the SEIS.*

COMMENT: The impact of the District's firewood program on neighboring communities' air quality needs to be considered.

RESPONSE: *The air quality section of chapter 4 has been revised. The amount of available firewood is expected to decline sharply, due to decreased timber harvest levels and increased retention of coarse woody materials for ecosystem management objectives, including wildfire requirements.*

Soils/Site Productivity

COMMENT: Address ways to reduce soil compaction.

RESPONSE: *Soil compaction is an unavoidable adverse impact when heavy equipment is permitted on the land. However, the PRMP has adopted a series of Best Management Practices (Appendix G) that are designed to prevent or mitigate the effects of compaction. Additional mitigating measures are employed on a site by site basis to reduce compaction and the subsequent productivity losses, soil erosion, siltation, and increased peak*

flows. Productivity losses due to soil compaction will be limited to one percent or less where ground based equipment is employed.

COMMENT: The BLM should reduce or eliminate broadcast burning because burning reduces site productivity, increases erosion, kills small trees, reduces mycorrhizae, and damages adjacent timber lands.

RESPONSE: *Broadcast burning is used for several purposes including providing planting sites for seedlings, controlling competing vegetation, and to reduce the risk of wildfire. Logging slash, when left untreated, can burn very intensely under wildfire conditions. Best Management Practices (BMPs) have been used since the 1980s, to reduce the impacts on site productivity due to broadcast burning. Refer to the appendices for current BMPs on broadcast burning. Alternatives to broadcast burning such as hand piling and burning, lopping and scatter of limbs, and cutting of planting holes in slash are also used where feasible. Broadcast burning is one of several tools used for site preparation and will continue in the future. However, broadcast burning levels will decrease due to changes in harvest practices and other resource management objectives and constraints.*

COMMENT: Protective standards for potential landslide areas have not been described. Provide information regarding slope stability which is needed for, among other things the location of waste disposal sites.

RESPONSE: *BLM's Intensive Timber Production Capability Classification (TPCC) inventory, classifies areas based on soil and site susceptibility to degradation from timber management activities. Fragile soil areas were identified at two degrees of susceptibility to management activities. One was the identification of areas where management activities would result in detrimental impacts to soil/site productivity and/or potential off site impacts. An example of this is the TPCC category, FGNW which identified the areas of potential landsliding that could enter waterways. These sites were designated as "nonsuitable woodlands" and will be managed to protect and enhance their non-timber values. The second grouping of fragile sites is the "fragile suitable restricted. These areas have been identified to be fully capable of timber management without site deterioration or off site impacts when Best Management Practices (Appendix G) are used to protect and mitigate impacts from management activities. During site-specific planning, in addition, on-site investigations are conducted on these lands so we can avoid areas subject to landslides or provide adequate protection to limit their number and size.*

COMMENT: Clearcutting causes soil destruction and productivity losses.

RESPONSE: *Most sites that are prone to landsliding or surface erosion have been identified by the Timber Production Capability Classification (TPCC) inventory. Others will be identified during site-specific planning. Some of these sites, "fragile nonsuitable woodland", are not planned for harvest. The remainder of these sites have been identified as fragile and require special restrictions or mitigation measures to avoid unacceptable soil impacts and productivity loss. Using management direction for the PRMP in chapter 2 and Best Management Practices (BMPs) will minimize soil destruction and productivity losses. In addition, under PRMP management regimes, areas scheduled for harvest will have an average of at least 6-10 green trees per acre retained after harvesting activities have been completed.*

Retention of snags and green trees on the completion of harvest operations will provide future large woody debris to assist in maintaining soil productivity.

COMMENT: FORCYTE-II and other ecological models should be applied to a broad range of potential management prescriptions to reduce risk of long-term site degradation. These models and models of physical properties, such as erosion, should be employed in a realistic test of timberland suitability.

RESPONSE: *Using FORCYTE, a full range of prescriptions was analyzed on seven different site conditions. The impacts of these prescriptions were carried through as if the same prescription was used for 600-900 years. The trend of mean annual production and site quality were then reviewed to help resource managers determine the preferred prescription to use. Timberland suitability has been determined through the Timber Production Capability Classification (TPCC) inventory which will be updated over time to keep up with research data and improve mapping.*

Water Resources

COMMENT: Establish riparian management areas (RMAs) of sufficient width to achieve restoration on streams in poor condition. Place a high priority on restoration in these watersheds and include the State and other interest groups in restoration plans.

RESPONSE: *Riparian Reserve widths of Alternative 9 of the SEIS have been applied to BLM-administered lands by the SEIS ROD and have been incorporated into the PRMP. The Riparian Reserve widths may be modified after watershed analysis which will consider factors that include stream condition. Review and guidance for possible modifications of Riparian Reserves would be coordinated through the Regional Ecosystem Office. Restoration will be based on watershed analysis and planning. Watershed analysis will also be used to identify and prioritize potential cooperative projects involving various landowners. Additional information on restoration can be found in SEIS Appendix A: FEMAT Chapter V Appendix J, and SEIS Appendix B6: Aquatic Conservation Strategy.*

COMMENT: The Scientific Panel has determined that "no-cut" buffers of at least 50 feet are needed to protect intermittent streams with unstable soils.

RESPONSE: *The PRMP incorporates such buffers in Riparian Reserves which will include unstable and potentially unstable areas.*

COMMENT: The relegation of first and second order streams to a lower level of protection than higher stream orders is inconsistent with the Oregon Water Quality Standards and with EPA's Regional Riparian Management Policy.

RESPONSE: *The PRMP provides for a riparian reserve on all streams (including ephemeral and intermittent). See chapter 2 for management action/direction.*

COMMENT: Intermittent streams should be managed according to specific standards. Intermittent and ephemeral streams are treated no differently than any other forest acre in the plans, yet they are major sources of landslides and debris flows and serve as critical habitats for amphibians.

RESPONSE: *Ephemeral and intermittent streams are protected through the use of riparian reserves in the PRMP. (See previous response).*

COMMENT: BMPs listed in the plan contain few measurable standards. BMP language should include conditions for which BMPs are applicable.

RESPONSE: *BMPs will be prescribed and implemented based upon site-specific conditions and requirements. BMPs will be monitored and evaluated and modified as necessary through an iterative process to meet water quality criteria and other resource management objectives.*

COMMENT: The 1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution (NPS Assessment Report) should be used in conjunction with Oregon's 1992 Water Quality Status Assessment (305(b)) Report, and other data, to establish:

1. Desired future condition on a stream-by-stream basis
2. Criteria and priorities for cumulative effects analysis
3. Priorities for water quality monitoring programs
4. Criteria and priorities for watershed level activity plans
5. Priorities for watershed rehabilitation programs
6. BMPs and watershed harvest deferrals

RESPONSE: *We agree. These items will be established during plan implementation.*

COMMENT: The EIS should not rely solely on the application of BMPs to satisfy the Clean Water Act. Discuss the effectiveness of BMPS.

RESPONSE: *The Aquatic Conservation Strategy in the SEIS record of decision and BMPs are the primary mechanisms to enable the achievement of water quality standards. BMPs are selected to achieve water quality standards. The iterative process that will be followed includes:*

1. Design of BMPs based on site-specific conditions, technical, economic and institutional feasibility and the water quality standards of those waters potentially impacted.
2. Monitoring to ensure that practices are correctly designed and applied.
3. Monitoring to determine:
   a. The effectiveness of practices in meeting water quality standards.
   b. The appropriateness of water quality criteria in reasonably assuring protection of beneficial uses.
4. Adjustment of BMPs when it is found that water quality standards are not being protected to a desired level and/or possible adjustment of water quality standards based on considerations in 40 CFR 131.

COMMENT: Include a BMP outlining specific parameters applicable to project-specific cumulative watershed effects analysis.

RESPONSE: *A cumulative watershed effects BMP has been incorporated into the PRMP and considers applicable beneficial uses, NPS Assessment and 305(b) reported conditions, and monitoring and inventory data. When new methods of analysis are developed and validated they will be incorporated.*

COMMENT: Include a BMP with a commitment to activity deferrals when the cumulative effects analysis identifies probable beneficial use impairment. Include a BMP outlining a more conservative site-specific project planning approach when cumulative watershed effects analysis tools are not available, are under development, or have not been validated.

RESPONSE: *A BMP has been incorporated into the PRMP to address activity deferral or mitigation of cumulative watershed effects where impacts to beneficial uses are probable.*

COMMENT: BLM should not allow discretionary mining, grazing and other discretionary activities which would increase temperatures over the long term in streams not meeting state standards for temperature.

RESPONSE: *Authorized management actions will be designed or regulated to comply with applicable water quality criteria for the protection of identified beneficial uses. and the Aquatic Conservation Strategy.*

COMMENT: Acknowledge the limits on the availability of surface water and address surface water quality problems.

RESPONSE: *Current Departmental policy requires that we follow state requirements for the acquisition of all necessary water rights. Where surface water is limited in availability, we will pursue acquisition of water rights based upon the most current Departmental policy. Surface water quality problems as identified in the Oregon Nonpoint Assessment Report and the 1992 Water Quality Assessment (305 (b)) Report and/or district inventories are described in chapter 3 of the RMP/EIS.*

COMMENT: Describe watershed improvement and stream restoration activities which increase low season flow.

RESPONSE: *Implementation of riparian enhancement projects which enhance the potential for bank storage and slow release through establishment of proper function riparian systems. Also mitigation of existing compaction through obliteration of roads or other compacted land surfaces to restore slope hydrologic functions, will improve flood plain and upland hydrologic functions to enhance low season flow.*

COMMENT: Set watershed impact standards, including maximum soil compaction, erosion rates, equivalent clearcut acres and relative percentage of seral stages.

RESPONSE: *Across the board watershed prescriptions are inappropriate. Prescriptions for individual watersheds will be based upon watershed analysis, application of BMPs and assessment of cumulative watershed effects, considering watershed specific soils, geology, inherent channel stability, beneficial uses to be protected, and other relevant site specific characteristics.*

COMMENT: Watersheds should be classified and prioritized according to current functional or ecological conditions and importance for maintaining viable wildlife populations.

RESPONSE: *Although BLM's forest inventory data provides some information on overall ecological or functional condition, this information cannot be disaggregated by watershed and remain statistically valid. Data on intermingled private lands is even less useful. We are implementing a riparian inventory to assess functional condition of stream reaches and riparian zones.*

COMMENT: Watershed-specific standards should be developed in cooperation with adjacent lands.

RESPONSE: *Cooperation with other parties may often be an appropriate way to implement RMP decisions most effectively, and their involvement will be encouraged. It is not appropriate, however, to make RMP implementation dependent on the cooperation of other landowners.*

COMMENT: Watershed concerns suggest that road culverts design standards should be based on 50-year peakflow, not 25-year.

RESPONSE: *Road culvert standards have been revised to require that culverts be designed to accommodate at least the 100-year flood. This conforms the PRMP to the standards and guidelines.*

COMMENT: The goal for watershed management in watersheds providing surface water to public systems serving municipalities should be restated, as being to assure the needs of the users are addressed and to protect comprehensive water quality.

RESPONSE: *Watersheds providing surface water for domestic uses will be managed to meet applicable water quality requirements established through Oregon Department of Environmental Quality.*

COMMENT: Display severely impaired streams identified by DEQ's 1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution within analytical watersheds.

RESPONSE: *This has been added to the Salem District PRMP. See chapter 3.*

COMMENT: DEQ's 1988 non-point source report identified many stream segments in the district that have serious non-point source pollution problems caused by forest practices. The DEIS should have updated that report with more recent information. What is BLM doing about the problems?

RESPONSE: *The 1988 319 Assessment Report was a collaborative effort undertaken by many agencies and groups within the state. BLM district personnel played an integral role in providing the information contained in the report. We, in cooperation with Oregon DEQ, are in the process of systematically updating the Assessment Report. As a Designated Management Agency under the Clean Water Act we have worked and will continue to work closely with Oregon DEQ in improving and updating the assessment of stream segments on BLM-administered lands. Opportunities to mitigate existing NPS pollution sources will be an integral component of plan implementation.*

COMMENT: Contact Oregon DEQ for their results of recent monitoring programs on streams.

RESPONSE: *As a Designated Management Agency we work closely with Oregon DEQ on all aspects of the Nonpoint Source Pollution Management Plan, including the sharing of data relevant to BLM-administered lands.*

COMMENT: On-the-ground mapping of streams and stream orders, with clear identification of addressed intermittent and perennial streams is needed. The maps should also present 100-year flood plains and potentially hyporheic zones.

RESPONSE: *Such mapping would be a massive undertaking and would have to cover not only BLM-administered lands, but also some of the intermingled lands in other ownerships. We have plans for revising and upgrading the current hydrography data themes for our GIS system to be completed concurrent with implementation of the plan. Currently, we do not have plans for mapping 100-year flood plains or potential hyporheic zones.*

COMMENT: Ten years is not an appropriate time frame for assessing effects to water quality. At a minimum short-term time frames should be analyzed under the shortest practicable period of time related to the implementation of specific activities.

RESPONSE: *The RMP does not fix dates for the implementation of specific activities that might affect water quality. Most site-specific activities contemplated will occur two or more decades in the future, not during the life of the plan. Most that will occur during the life of the plan are not site-specifically established but their approximate location is projected through the 10-year timber management scenario. Shorter time frames can only be assessed as annual or sequential multi-year plans for site-specific treatments are developed.*

COMMENT: Roads cause most of the sedimentation in our rivers through surface erosion and landslides.

RESPONSE: *The BLM will continue nonpoint source pollution management in accordance with the guidelines established by the Environmental Protection Agency (EPA) and the Oregon Department of Environmental Quality (ODEQ). Appendix G contains a section on Best Management Practices (BMPs) that will be used to help ensure compliance with these guidelines. Some of these practices include revegetating exposed soils, restricting access to natural surface roads, and paving or rocking permanent roads. Temporary roads will be put to bed or erosion control practices will be used to keep erosion to an insignificant level. Management activities and new road construction will be designed, located, and constructed to avoid mass soil movement. As stated in the SEIS ROD Aquatic Conservation Strategy, watershed restoration will include control and prevention of road-related runoff and sediment production. The Timber Production Capability Classification (TPCC) inventory has located areas with surface erosion and landslide limitations. This inventory data will be supplemented by an on-site investigation for each proposed management activity. In Key Watersheds identified in the SEIS ROD, there will be no net increase in roads.*

COMMENT: The plans for road building violate the Clean Water Act because new roads will contribute sediment to already impacted streams.

RESPONSE: *BMPs will be implemented to minimize potential impacts from both new and existing roads. In addition, opportunities will be identified through project planning to mitigate existing nonpoint sources of sediment.*

COMMENT: It is unclear how the Watershed Condition Index (WCI) was generated; how it was used in planning; how it will be used in standards, guidelines and monitoring; and how it will be validated.

RESPONSE: *The WCI has been dropped as an analytical tool (see chapter 4).*

COMMENT: Explore the possibility that mining activities on BLM lands cause significant increases in the concentrations of metals in streams that supply public water systems.

RESPONSE: *Mining activities on BLM-administered lands must comply with surface management regulations, state water quality criteria and Best Management Practices, to protect beneficial uses such as public water supplies.*

COMMENT: The people that BLM would be dosing by allowing pesticides, inerts, fertilizers and the like to get into drinking water supplies would be at risk.

RESPONSE: *The buffering of streams when such products are used is part of the commitment to provide treatable water at the point of intake. Impacts of the use of herbicides and inert carriers have been fully addressed in BLM's Western Oregon - Management of Competing Vegetation EIS and Northwest Area Noxious Weed Control EIS.*

COMMENT: Expand the discussion concerning the availability of groundwater and groundwater quality.

RESPONSE: *Available information, mostly from other agencies, has been incorporated into the RMP/EIS. The extent of ground water supply effects is a site-specific issue and will be evaluated at the watershed or project level. Management prescriptions will be developed in all instances where groundwater quality might be potentially impacted.*

COMMENT: The need for acquiring private landowners water rights and establishing instream rights should be stressed.

RESPONSE: *The BLM will identify and attempt to obtain instream flows needed to maintain riparian resources, channel conditions, aquatic habitat, and water quality.*

COMMENT: Has a complete inventory been conducted to assess the district's wetland resources? How are significant impacts assessed? How will wetland inventories be conducted prior to timber harvests and other activities?

RESPONSE: *Most wetlands on the Salem District have been identified through the mapping of the Timber Production Capability Classification under fragile water and nonforest water categories. In addition, wetland inventories will be part of site-specific interdisciplinary inventories conducted prior to activities. Project plans will identify appropriate protection for these lands consistent with our goal for the protection of water quality and existing federal direction for their classification and preservation. See riparian objectives in chapter 2. Environmental analysis of these plans will lead to determination if impacts would be significant.*

COMMENT: Specifically name wetlands as features for which riparian management areas will be established and specifically identify wetlands that will be restored or enhanced.

RESPONSE: *The PRMP/FEIS acknowledges wetlands and provides management direction for their protection. Opportunities to restore or enhance wetlands will be identified during implementation of the plan.*

COMMENT: Acknowledge the need to coordinate and cooperate with public and private landowners to inventory wetlands, set criteria for significance for protection and restoration, and coordinate priorities to protect and restore public wetlands.

RESPONSE: *Coordination and cooperation with other landowners may be an appropriate way to implement RMP decisions most effectively. It is not appropriate, however, to make RMP implementation dependent on the cooperation of other landowners.*

COMMENT: Provide a more thorough discussion of the potential effects on water yields and streamflow.

RESPONSE: *The chapter 4 discussion on this topic reflects the circumstance that potential effects on water yield and streamflow are highly dependent upon physio-climatic watershed conditions and the nature of management action. Reduction of evapotranspiration immediately following regeneration timber harvest will generally make more water available for streamflow, though the duration and timing of increased yield will be highly variable. Analysis of water yield and timing will be a component of watershed analysis.*

Biological Diversity

COMMENT: Emphasis remains on single species recovery programs rather than on habitat protection and other measures that focus on maintaining biodiversity.

RESPONSE: *The emphasis of the PRMP is dual. Emphasis on existing recovery programs must continue until a decision is made on the recovery status of species such as the peregrine falcon, Columbian white-tailed deer, and bald eagle. The USFWS currently focuses on single species recovery and until an official shift to habitat recovery is made, BLM land management must satisfy single species management requirements.*

COMMENT: Old Growth Emphasis Areas do not protect old growth ecosystems from logging roads, soil compaction and other threats to biodiversity.

RESPONSE: *The PRMP substitutes Late-Successional Reserves. Thinning or silvicultural treatments within them must be beneficial to the creation of late-successional forest conditions.*

COMMENT: Identify and examine expected future condition for biodiversity. Relate to the compositional, structural and functional attribute of ecosystems and include a regional perspective.

RESPONSE: *Effects of the various alternatives on biodiversity were analyzed in chapter 4. Due to limited knowledge of these effects, the results of this analysis must be viewed as preliminary.*

COMMENT: Provide information on the current condition of ecosystems and their compositional, structural and functional attributes.

RESPONSE: *Information gleaned from existing inventories was used to develop the information displayed in the Biological Diversity section of chapter 3 in the draft RMP. In the PRMP/FEIS we used data from a Forest Service synthesis of available information about the pre-settlement characteristics of Pacific Northwest forests to compare current forest condition and function with the range of pre-settlement conditions. Ecosystem functions reflect the underlying ecosystem processes. These can sometimes be the subject of inventories; for instance, inventories describing the nesting success of spotted owls provide an indicator of one aspect of ecosystem function. Where possible, such statements of ecological function are shown in chapter 3, Biological Diversity and Ecological Health, or other sections describing specific resources.*

More generally, ecosystem processes are implied from the presence of species, structures, and disturbance intervals known to be required for functions to occur. For instance, the retention of nitrogen fixing plants in young stands, nitrogen- fixing lichens in large old trees, and microbial nitrogen fixation associated with down wood maintains processes which help maintain site productivity. If forest conditions are maintained within the range of natural variation which occurred before settlement began, and if species mixtures and structural complexity are retained, it is thought that ecological functions will be maintained.

COMMENT: Express the amount of large woody debris (LWD) to be retained by size class, i.e., logs at least 20 feet long and 25 inches in diameter at the large end.

RESPONSE: *We have adopted the SEIS ROD standards. Pending development of models specific to plant associations and stand types, the interim guidelines consider only logs 20 feet or longer and at least 20 inches in diameter as relevant in this district.*

COMMENT: Permit the retention of LWD from the merchantable component if the unmerchantable component is absent.

RESPONSE: *Merchantable and nonmerchantable down wood will be candidates for retention in meeting structural targets within the analytic landscape, however nonmerchantable wood will be utilized first in satisfying targets.*

COMMENT: Within 100 years of management under the draft plans, almost all large woody material will disappear in GFMAs.

RESPONSE: *Because there are differences in the decay rate for down wood in different environments and because the contribution of down wood is usually periodic, related to root diseases, storm events and other disturbances, there will be variation in the amount and size of down wood which will exist in the forest for different structural (age) classes. For the PRMP, structural targets have been set as described in chapter 2. The shorter harvest rotations set for the GFMA would likely reduce the large woody debris component. However, according to specifications established in the PRMP (which tiers to the SEIS ROD), retention of some green trees, snags and available large woody debris will benefit large woody material in the GFMA.*

COMMENT: Include retention of target levels of dead-and-downed wood in timber sale contract stipulations.

RESPONSE: *Retention levels set forth in the plan objectives will be translated into contract stipulations.*

COMMENT: The substitution of geographically diverse plantation stock for narrow, locally adapted families may increase diversity at the site level, but homogenizes the landscape and thus reduces overall diversity. Address the influence of BLM's tree improvement program at the species, ecosystem and landscape levels.

RESPONSE: *We expect to re-examine our tree improvement program and the extent to which we use genetically improved stock, to assure that the genetic diversity of the forest is maintained at the stand level and at the regional level. The tree improvement program appears to increase our ability to fit naturally evolved and adapted genotypes to forest sites, to maintain the genetic quality of forest stands and to be useful in increasing resistance of stands to global climate change.*

Management of the forest with or without tree improvement has the potential to change genetic diversity. Tree improvement assures genetic conservation of desired genotypes for use in meeting resource management objectives.

Old-Growth Forest

COMMENT: The DEIS violates NEPA by failing to adequately describe the complexity of old-growth forests.

RESPONSE: *Entire books have been written describing that complexity, which the EIS recognizes. It is not appropriate for an EIS to repeat at length general information previously published.*

COMMENT: Preservation of old growth forests is impossible as trees have finite life spans.

RESPONSE: *Although individual tree death is a natural part of old-growth ecosystems, Morrison and Swanson (1990) and Agee (1991) showed that old-growth Douglas-fir ecosystems persisted on sites over many centuries. These ecosystems are renewed and regenerated by under-canopy and patchwork fire, and gap mortality. Our EIS examines the ability of the different alternatives to provide old-growth habitat within the general BLM-managed landscape. The loss of some older stands from wildfire and other causes, and the death of trees is assumed and is included in seral diversity analyses. It is also assumed that prescribed fire and other practices would sometimes be used to control seral changes within older stands which might cause them to shift away from desired old-growth conditions (for instance shifting away from conifer dominance and toward tanoak dominance).*

COMMENT: The old-growth inventory should be corrected or augmented to identify old-growth stands meeting the PNW-447 and GTR-285 definitions.

RESPONSE: *We do not have a specific old-growth (late successional stage) inventory. We have an operational inventory of timber stands which identifies locations of late successional forests and their timber inventory attributes. These attributes include overstory and understory timber size, volume and age classes.*

COMMENT: Old-growth could be heavily impacted by density management and lose its habitat value.

RESPONSE: *Stands meeting minimum old-growth definitions are not proposed for density management. Density management is normally proposed only for stands under 80 years of age (110 years in the northern coast range Adaptive Management Area) and must be expected to be beneficial to the creation of late-successional forest conditions. Density management of young mono-species/canopy plantations in Late Successional Reserves is to focus on increasing diversity within stands through development of multiple canopies with a mix of species.*

COMMENT: The amount of rare, old forest that will be lost if the preferred alternative is adopted is understated. In the long run only one-third of OGEAs will qualify as old-growth. No uncut, natural forest existing in OGEAs today will survive full implementation of the plans. Explain how clearcuts with minimal retention in OGEAs, even with a 300-year rotation, maintain and enhance old-growth characteristics.

RESPONSE: *This approach is no longer part of the PRMP.*

COMMENT: Small old-growth patches may provide necessary ecosystem functions, depending on the relative proximity of other old stands and the general structure of the landscape. Small patches may become quite valuable if they exist in the context of a natural stand that seals edges and provides connectivity. There is no evidence that BLM considered these factors in making land allocations.

RESPONSE: *We agree that the matrix within which older forest patches exist is a significant component of wildlife habitat, as is the total landscape arrangement of habitat grains of various sizes, shapes, and seral stages. Under the PRMP, late-successional forests will be managed to retain such patches. The standard and guideline will be applied in fifth field watersheds in which federal forest lands are composed of 15 percent or less late-successional forest. Project-level NEPA analysis will address effects on the remaining late-successional forests.*

COMMENT: Solutions to the shortfall of older-aged components in the Coast Range (Eugene, Salem, Coos Bay) should be analyzed.

RESPONSE: *The SEIS analyzed a range of alternatives to protect or enhance late-successional and old-growth ecosystems including the Coast Range.*

COMMENT: Further evaluate the impacts on biological diversity in the Coast Range from harvesting old growth in the general forest allocation.

RESPONSE: *In the Salem District, only a small portion of remaining old-growth in the GFMA in the Coast Range is expected to be harvested under the PRMP in the first decade.*

COMMENT: Old-growth acreage should be reported by forest cover type.

RESPONSE: *Reporting such information would be desirable but at this time that information is not available. As the forest plan is implemented and further old growth inventories are initiated, this information will become available. Unfortunately, data on the series, habitat type or plant association do not currently exist, although the approximate associations can be estimated by province and sustained yield unit. Dominant and understory forest tree information is available and is included in the final plan inventory of forest conditions. Data is provided in district files.*

COMMENT: The GIS technology should be used to identify patches of ancient forest embedded in mature forests that could develop interior conditions in the near future and to target other areas for restoration of interior forest habitat.

RESPONSE: *Our Operations Inventory is not detailed enough to identify the features relevant to such projections. Our current GIS system lacks image processing capabilities to identify and classify these areas. The GIS technology was used, however, to help select lands for late-successional reserves which will provide much of the*

long-term interior old-growth forest on BLM-administered lands. Watershed analysis will further consider potential future landscape arrangements.

Ecosystem Management

COMMENT: The checkerboard ownership pattern makes it unlikely that the ecosystem management objectives will be achieved.

RESPONSE: *The PRMP approaches ecosystem management utilizing a variety of temporal and spatial landscape allocations. BLM manages land that is mostly in a checkerboard pattern, it is true. The ecosystem management vision can not be achieved by BLM alone but through cooperation with other public agencies over a broad landscape. Such cooperation is a strong component of the SEIS decision strategy.*

COMMENT: Identify how silvicultural practices will lead to the goals of ecosystem management.

RESPONSE: *Silvicultural systems define the sequence of management practices that take place over the life of stands in a managed forest to meet land management objectives. See appendix K for structural retention and development of late successional stage systems. Structure in an ecosystem or community is the relationship of physical size, height and vertical stratification of vegetation. Managing younger stands with low levels of structural diversity toward more complex conditions is important in several land use allocations to meet non-timber objectives.*

COMMENT: Specify methods for coordinating biodiversity and ecosystem management goals with other landowners, specifically the Forest Service and the State.

RESPONSE: *The SEIS ROD addresses this topic primarily in the Interagency Coordination discussion in section E of its Attachment A.*

COMMENT: The silvicultural systems proposed bear no resemblance to natural processes that should be emulated in a program of genuine ecosystem management. The overall effect of the intensive management regime proposed will be a highly fragmented landscape with some stands of old-growth trees but few if any other characteristics of an ancient forest ecosystem. Even the pattern of residual trees bears no resemblance to natural mortality. Natural catastrophic fire would leave many well-distributed snags and clumps of green survivors. The scattering of residual trees proposed would not likely survive the first major winter storm.

RESPONSE: *The rationale for partial tree retention is not so much to precisely parallel natural processes as it is to provide a biological legacy and maintain long-term site productivity. See the FEMAT report, P. IV-34. A legacy is something passed on from one generation to future generations. Like trees which survived catastrophic fires or windstorms, retained legacy trees will be well distributed and clumped, and would provide a source of seed as well as important habitat components such as large green trees, snags, and eventually, large down logs. While blowdown and breakage is a problem in some locations, experience indicates that most retained trees would remain standing for many years.*

Vegetation - Including Special Forest Products

COMMENT: Contrast the differences between early successional stages resulting from natural processes and those resulting from silvicultural prescriptions.

RESPONSE: *The structural differences between seral stages resulting from various levels of natural stand replacement and conventional, even-aged management are shown in figure 3-1. Silvicultural systems can produce early seral stages with a wide variety of structures and compositions depending on the approach taken, including structures and compositions which resemble those originating from natural processes. The primary difference between the compositions of young stands arising from natural disturbance and young stands arising from harvests are lower levels of standing dead and down wood.*

COMMENT: The plans should include a detailed summary of forest age class distribution through time, with a separation of two-stage and multi-stage stands.

RESPONSE: *Such projection would be complex and time consuming and would be unreliable until most watershed analyses are done. We believe it would have little utility without information on spatial distribution, which cannot be projected.*

COMMENT: The importance of conserving relatively rare hardwood forests is virtually ignored. Conversion of hardwoods to conifers should be approached with caution, as there are ecological reasons why many sites are dominated by hardwoods.

RESPONSE: *Conversion is proposed only in the GFMA on sites considered natural conifer sites where past management led to conversion of the site from conifers to hardwoods. The PRMP provides for the retention of existing natural hardwood stands and their management for the sustained yield of hardwood resources. Species diversity requirements for reforestation actions, prescribed fire treatments, and subsequent stand management will assure the retention of native hardwood species within stands considered for active management.*

COMMENT: Display current acreage of major hardwoods groups in conifer dominated stands, mixed conifer-hardwood stands and hardwood dominated stands. A further breakdown into seral hardwoods and hardwoods commonly present throughout the life of a stand would be helpful. Display projected changes in these hardwood acres by alternatives.

RESPONSE: *Current acreage of conifer-dominated stands and hardwood-dominated stands by age class is displayed in tables 3-41 and 3-42. Hardwood stands on the Salem district often contain a significant conifer component, averaging about 30 percent of total volume. Red alder and bigleaf maple, the most common hardwoods, are primarily early seral species, with much shorter life spans than the major conifers. Under the PRMP, approximately three percent of the existing hardwood stands would be converted to conifers during the first decade. This would occur only on sites where past management resulted in conversion of the stand from conifers to hardwoods.*

COMMENT: Address threats (including those on private lands) to oak and other deciduous woodlands. Identify specific management plans for all hardwood stands.

RESPONSE: *Deciduous woodlands on BLM-administered land are threatened primarily by natural disturbance factors (such as fire). Timber harvesting has been traditionally focused on conifer stands.*

COMMENT: Develop and display goals, objectives and prescriptions for maintaining hardwoods, minor conifer species and shrubs.

RESPONSE: *Objectives have been added regarding native plant communities and species. Prescriptions are implicit in the management actions/direction, but would be site-specifically developed in implementation plans.*

COMMENT: Identify minor conifer species present in conifer dominated stands.

RESPONSE: *This information is presented in chapter 3, Vegetation.*

COMMENT: Address how current and proposed management complies with the Pacific Yew Act. Do this in addition to the separate EIS, being prepared by the Forest Service with BLM cooperating.

RESPONSE: *Such duplication is neither efficient nor appropriate.*

COMMENT: The Pacific Yew Act effectively bans even-aged management and slash burning in yew habitat. The draft RMP fails to adequately protect yew trees. The Pacific Yew Act may also require replanting of yew to the same stocking levels as before harvest.

RESPONSE: *As long as the Act remains in effect, resource management plan implementation actions in yew habitat will conform to its terms.*

COMMENT: The Draft EIS violates NEPA because it fails to disclose how long the proposed yew bark harvest rates can be sustained.

RESPONSE: *The RMP/EIS does not propose any specific rate of yew harvest. A permissible rate of harvest from National Forest System and BLM-administered lands was identified in the Record of Decision on the joint BLM-Forest Service Pacific Yew Management EIS, and its sustainability was analyzed in that EIS.*

COMMENT: Disclose where suitable mushroom habitat exists and the environmental impacts of logging on mushroom populations.

RESPONSE: *Data on suitable mushroom habitat is currently limited. The distribution and abundance of these species has not been determined on most BLM - administered lands. Chapter 4, Vegetation, has been expanded to address such impact concerns. In general, mushrooms that prefer late-successional forests would be favored under Alternatives C, D and E. Harvest of mushrooms would be done in compliance with appropriate National Environmental Policy Act (NEPA) regulations and consistent with ecosystem management principles. The final BLM Task Force Report, "Managing Special Forest Products in Oregon/Washington" was approved by the BLM State Director on March 31, 1993. It recommended that the BLM identify inventory, monitoring and research needs that reflect the biological sensitivity, public demand and interest in any given species of special forest products.*

The BLM Forest Ecosystem Inventory Handbook, published in October 1993 allows for collection of data on mushroom species, quantity and quality. This inventory has begun. Several research studies have been proposed to investigate the productivity and ecological habitat of noxious mushroom species. They would involve the BLM, the USFS Pacific Northwest Research Station and the National Biological Survey.

COMMENT: Harvest of minor forest products (such as salal, beargrass, ferns, moss and fungi) should be more carefully managed. Collection of such products should be by permit only, and should be monitored and enforced.

RESPONSE: *Discussions of management for such products have been added to Chapter 2. and a related element has been added to the monitoring plan. Although authorized harvest would be by permit only, monitoring and enforcement will not be totally effective due to the scattered locations of the resources.*

Riparian Zones

COMMENT: Define expected future condition for RMAs.

RESPONSE: *Objectives which do this for Riparian Reserves have been added for the PRMP, derived from the Aquatic Conservation Strategy objectives in SEIS appendix B6.*

COMMENT: Establish standards for all stream orders, reflecting functional and ecological differences between orders. These factors should ensure shading, water quality, microclimate, floodplain protection, and critical habitat for wildlife and sensitive species.

RESPONSE: *The Aquatic Conservation Strategy described in Appendix B6 of the SEIS requires that watershed analysis be a principal analytical foundation for management actions. Watershed analysis is required in Key Watersheds prior to land management and will eventually be accomplished for all watersheds. The information from watershed analysis will guide management prescriptions, including refining boundaries of riparian reserves, and developing restoration strategies and priorities.*

COMMENT: Address riparian area management at the watershed or landscape level, reflecting the current condition of watersheds.

RESPONSE: *Riparian Reserves are described in appendix B6 of the SEIS. Standards and Guidelines prohibit activities in Riparian Reserves that retard or prevent attainment of the Aquatic Conservation Strategy Objectives. Widths of Riparian Reserves are based on ecological and geomorphic factors. Those widths apply until watershed analysis is completed, a site-specific analysis is conducted and described, and the rationale for final Riparian Reserve boundaries is presented and approved.*

COMMENT: Clarify how average widths shown for RMAs are utilized in on-the-ground analysis. Include the documentation and the mechanisms to fully protect all beneficial uses for riparian areas including wetlands.

RESPONSE: *See previous response. Watershed analysis will identify the riparian reserve widths needed on specific stream reaches, wetlands, or other water bodies, to meet RMP objectives. Aquatic Conservation Strategy objectives would be met by completing watershed analysis (including appropriate geotechnical analyses) prior to construction of new roads or landings in Riparian Reserves.*

COMMENT: It is inappropriate to allow roads in riparian management areas to access timber harvest in other areas.

RESPONSE: *Construction of roads upslope and near ridges is normally preferred, but occasionally construction within (but toward the outer edge of) a riparian reserve may reduce the total road length needed for harvest access by so much that it is considered environmentally preferable to build the shorter road. Any road construction in Riparian Reserves would occur only after watershed analysis.*

COMMENT: BLM's proposed riparian management on perennial streams is only about half as wide as recommended by the Scientific Panel on Late-Successional Forest Ecosystems, which said, "Establishing wider riparian corridors on federal lands across the landscape will provide additional protection from disturbance and help initiate recovery of degraded areas."

RESPONSE: *In the PRMP, Riparian Reserve widths on perennial streams have been expanded to the widths recommended by the Scientific Panel.*

COMMENT: If riparian buffers are not at least three times the height of the tallest trees, windthrow over time will negate the design of the buffer.

RESPONSE: Windfirmness varies among sites. We do not believe such a generality is true.

COMMENT: Restoration of riparian areas in poor or deteriorating condition should be a high priority.

RESPONSE: *Priority will be given to restoration of degraded riparian areas. Watershed analysis will help identify priority areas. Key watersheds will have particular emphasis.*

COMMENT: RMA width should be appropriate to meet water quality standards, supply potential large woody debris and down wood, and manage for sensitive riparian-dependent species within a landscape context.

RESPONSE: *The PRMP Riparian Reserve widths aim at all these objectives. The opportunity to meet all of them (e.g., large woody debris) will not occur for many decades along some stream reaches.*

COMMENT: Plant conifers within hardwood-dominated riparian areas.

RESPONSE: *This will be incorporated in watershed restoration efforts where appropriate.*

COMMENT: Since tree diameter was selected as a measure of riparian zone health, indicate how diameter thresholds were selected.

RESPONSE: *The diameter thresholds were those available from our current extensive forest inventory (the*

operations inventory), which divides forest stands into four diameter classes. The largest class, above 21 inches, was defined as best (good/optimal). The second largest, 11 to 21 inches, was defined as next best (fair). The others were defined as poorest (minimal).

COMMENT: Since the RMP/EIS determines riparian zone forest age and size based on the timber operations inventory for adjoining up-slope trees, address the inventory's accuracy in riparian zones.

RESPONSE: *The Operations Inventory shows a different stand type in many riparian zones (because of a higher proportion of hardwoods) than that on the adjacent upland slopes. Where no change in stand type adjacent to streams is recorded, the upslope inventory was considered to represent the age and composition of the riparian zone vegetation as well. Generally, increased soil moisture and greater competition from other vegetation result in fewer but larger trees in the riparian zone compared to upslope areas. Thus, the condition of the riparian zone vegetation would tend to be underestimated when average tree diameter of upslope stands is used as the indicator.*

COMMENT: Provide tree species and density data and describe factors that may limit future riparian zone maintenance and production, such as water table alteration, in the riparian analysis.

RESPONSE: *Neither our forest inventory data nor other data are consistently specific enough to be considered valid for this purpose in riparian zones. Watershed analysis is expected to begin to address such concerns.*

Wildlife

COMMENT: In the analysis of wildlife populations, spatially explicit models were not used (excepting for spotted owls) and hence projections may be overly optimistic.

RESPONSE: *Spatially explicit models do not exist for most wildlife species, (elk is an exception). The best available models that could be applied using BLM's data base were used in the analysis of effects.*

COMMENT: There is an over-reliance on riparian zones for meeting the needs of wildlife communities. Many of the upland species habitats are not considered.

RESPONSE: *Upland habitats will be maintained or enhanced in significant amounts in Late-Successional Reserves, connectivity/diversity blocks, and special management areas.*

COMMENT: The wildlife species have been aggregated into groups that are inappropriate for assessing viability.

RESPONSE: *Aggregating wildlife species into groups with similarities in habitat requirements complements the concepts of ecosystem management. We acknowledge that there are some differences between species needs in a particular group (e.g., amphibians), but there are also broad similarities which can be dealt with more suitably in the development of forest plans often affecting hundreds of thousands of acres. One of the intended advantages of ecosystem management is to avoid the problems inherent on a species-by-species approach; primarily those of conflicting habitat requirements of individual species. A goal of ecosystem management is to provide a balance of all potential natural vegetation communities suitably distributed across the landscape. Viability assessment is primarily provided by the SEIS and the FEMAT report.*

COMMENT: Animal species which occur within the planning area, but with no known occurrence on Bureau lands, should be suspected as occurring on Bureau lands unless adequate inventory work shows otherwise.

RESPONSE: *We agree except where strong field evidence dictates otherwise.*

COMMENT: The effectiveness of Connectivity Areas as corridors for wildlife movement has not been adequately addressed. Consider their width, current habitat fragmentation within the corridors, the effect of timber

harvest on habitat mosaics including anticipated patch size, land ownership pattern and the different dispersal needs of wildlife.

RESPONSE: *In the RMP, the concept has been revised. Connectivity/diversity blocks will not be confined to specific corridors but will be spread out across the landscape. The idea is to enhance biodiversity and to help provide for dispersal of mobile wildlife species. Their effectiveness for the latter purpose is unknown, however, as dispersal needs of most species have not been researched.*

COMMENT: Identify the role and value of shrubfields as wildlife habitat. Assess whether any species are dependent on these shrubfields.

RESPONSE: *Shrubfields are very limited on BLM-administered land in the Salem District. Values will be addressed in watershed analysis.*

COMMENT: A 100 or 150 foot RMA for lakes, and ponds and other waterbodies may not adequately maintain or protect the inherent value and habitat use of the waterbody and adjacent zone, especially for fish-eating raptors.

RESPONSE: *The PRMP expands this width for lakes and natural ponds. All such buffer widths may be adjusted after watershed analysis, based on site-specific characteristics.*

COMMENT: Conduct a district-wide inventory of sensitive wildlife areas.

RESPONSE: *A partial district-wide inventory of sensitive wildlife areas has been accomplished (e.g., nest sites of ospreys, great blue herons, marbled murrelets, bald eagles, spotted owls). Gathering updated information as well as additional species data will be part of monitoring and continuing inventory. These data are recorded in a district-wide data base.*

COMMENT: Provide management consideration for all species contained on the district that are described the ODFW's 1992 "Sensitive Vertebrates of Oregon".

RESPONSE: *Relevant species listed in ODFW's 1992 list of "Sensitive Vertebrates of Oregon" are addressed as Special Status Species and SEIS Special Attention Species in the PRMP/FEIS.*

COMMENT: Identify the species expected to benefit from connectivity areas, and their expected function for each species. Evaluate the ability of the areas to provide these functions, relating to their locations, width and proposed management. Address their lowest condition expected relative to old growth characteristics and its relation to desired future condition.

RESPONSE: *Not enough is known about the mobility patterns of species to permit a species-by-species discussion of the value of these areas. Given the checker board pattern of BLM-administered lands, species with greater mobility would likely benefit more than species with low mobility.*

COMMENT: A more formalized risk assessment regarding old-growth sensitive species is needed. Alternative E could serve as a benchmark.

RESPONSE: *Risk assessment regarding such species was accomplished in the SEIS.*

COMMENT: Address how BLM proposes to improve marginal elk forage conditions and to meet habitat effectiveness and herd number objectives.

RESPONSE: *We propose to conduct some forage seeding to improve elk habitat. The cover quality and spacing indices would likely be improved by establishment of reserves and connectivity/diversity blocks. We also propose a variety of road closure or access limitation measures to reduce road density levels.*

COMMENT: Where feasible, expand forage seeding programs to benefit big game.

RESPONSE: *We propose to do some forage seeding. However, this program will necessarily be limited by the reduced level of clearcutting and burning under the PRMP. For example, past observations indicate that forage germination is best after burning has produced black ash seedbeds. This condition is expected to be limited in the future. We are also considering the use of native forage species in future forage enhancement projects. Unfortunately, lack of a reliable source of seeds for native species may also limit our forage enhancement program.*

COMMENT: The method used to analyze effects on elk populations is flawed. The importance of "optimal thermal cover" to elk is grossly exaggerated. The fastest increase in elk populations ever recorded occurred in the Mt. St. Helen's blast zone, where optimal thermal cover does not exist. There is no evidence suggesting that "winter kill" of elk, which thermal cover attempts to ameliorate, is a problem in western Oregon.

RESPONSE: *The Wisdom Model is considered the most widely accepted professional model to analyze elk habitat condition at this time. It was developed by professional biologists and represented the best information at the time of its development. Validation of the model is the subject of a research study currently being conducted by Oregon State University in conjunction with BLM. The Wisdom Model was developed for forest ecosystems, not blast zones.*

COMMENT: Re-evaluate elk habitat conditions using all four habitat variables in the Wisdom model. Identify the current habitat effectiveness for the four variables by sub-watershed. Include private lands in the assessment.

RESPONSE: *Application of the Wisdom Model to BLM-administered lands was modified to reflect shortcomings in BLM's existing database. For example, we do not have sufficient vegetation data on private lands to permit an automated analysis of existing elk habitat condition over all ownerships. This limitation was shared with ODFW at an early phase of our analysis. We have, however, developed an automated analysis to evaluate elk habitat condition on BLM-administered lands using the forest inventory database. Three of the four indices are readily calculated using this method. The fourth index, the spacing index, can be calculated using automated methods but it is fairly cumbersome and time-consuming. With scattered private lands in many of the analysis areas, calculating the spacing index for only BLM-administered lands may be less meaningful than the indices produced for the other three variables. ODFW has developed criteria to approximate the spacing index by using proportions of cover and forage.*

Our automated procedure produces area tables to calculate habitat effectiveness indices and graphical outputs to display habitat condition. The procedure also produces acres of private lands within the analysis area (e.g., watershed or some other polygon). Thus, estimates of elk habitat condition on private land can be made and proportionally related to total acres of private land. Due to the very limited amount of thermal and optimal thermal cover on private lands, plus the lack of forage seeding on much of this land, index levels are anticipated to be even lower than calculated values for BLM-administered lands only. This was the case in one sample district where this analysis was done using our gross vegetation theme as the database from which estimates on private land were made.

Evaluation of elk habitat condition was not extended to the subwatershed scale because we believed this to be most properly evaluated during watershed analysis as part of implementation planning than at the RMP/EIS level. This was also discussed with ODFW in the initial phases of our analytical work. At least one district used watersheds for the RMP/EIS analysis, but these areas were much larger than the 1-6,000 acre level suggested by the Wisdom model. However, these large watersheds can be subdivided into smaller subwatersheds which could serve as permanent compartments to keep records on elk habitat condition.

COMMENT: Set measurable goals for elk habitat effectiveness on a sub-watershed basis. Develop these goals in concert with ODFW.

RESPONSE: *Goals have been developed by ODFW and are delineated in an ODFW document entitled "Plan Review Criteria to Conserve Fish and Wildlife Resources on Bureau of Land Management Forest Lands in Western Oregon."*

COMMENT: Establish habitat goals to reduce bull elk vulnerability to harvest and relate to Oregon's elk plan.

RESPONSE: *The goals established by ODFW for our elk habitat effectiveness indices are related to Oregon's elk plan.*

COMMENT: Display the amounts of early successional stages in each alternative during the first decade. Identify the consequences to wildlife species heavily dependent on these stages.

RESPONSE: *The total acreage of each seral stage at 10 years and 100 years is illustrated in Figures 4-2 and 4-3. The basic assumption underlying the analysis of effects in Chapter 4 is that timber harvest on the intermingled private lands within and surrounding the BLM operating area will provide adequate amounts of suitable early successional habitat for species dependent only upon the early seral stage - regardless of the alternative chosen by BLM. Our planning alternatives would add varying amounts to this base. Many species that use the early seral stage for one or more life needs are also dependent upon the presence of other habitat components within the early seral stage, such as snags, fallen trees (logs), residual green trees, etc. Consequences to these species are described in Chapter 4; see, for example, Purple Martin & Western Bluebird under "Effects on Special Status Species", and Secondary Cavity Users under "Effects on Wildlife"*

COMMENT: Identify concrete proposals to create snags, including estimated budgets. Adjust ASQ to account for snags created over time.

RESPONSE: *Among the objectives of the PRMP are to manage forest lands so as to retain 1) specific amounts of green trees which will provide snags in the future, and 2) all existing snags to the extent possible given essential considerations for worker safety. Amounts of timber volume to be foregone for this purpose have been estimated and the PSQ adjusted accordingly. Creation of snags from green trees will be accomplished through timber sale contract requirements and/or by separate projects, whichever is the most efficient use of public money. "Concrete proposals" to create snags can be developed only on a site-specific basis. Such proposals will be identified in implementation plans which follow completion of the RMP.*

COMMENT: Clarify assumptions and goals in modeling green tree retention and snag creation.

RESPONSE: *The goal of snag modeling is to describe the process of snag management and quantify impacts on the timber and wildlife resource. There are three basic assumptions:*

1. *Green trees retained following timber harvest will be converted to snags at future points in time so that adequate amounts of snag habitat will be available through the life of the new stand.*
2. *Concerns about worker safety will prevent retention of all existing snags and in some situations snags will have to be created from green trees after timber harvest.*
3. *Green trees and snags left after harvest will become large woody debris when they fall.*

COMMENT: There should be an assessment of wildlife usage before any snags are removed.

RESPONSE: *All timber sale planning will include field inspections by biologists for the purpose of assessing current and future use of the planned sale area by priority species of wildlife, including cavity-users.*

COMMENT: The Neitro et al. model used to address the effects of wildlife tree retention on wildlife is plagued by a myriad of problems. These problems cause the model to grossly overestimate the number of wildlife trees required to maintain healthy populations of dependent wildlife species. There is no documentation or justification for the even higher levels of wildlife tree retention proposed in the preferred alternative.

RESPONSE: *Evidence presented by scientists at Oregon State University indicates the opposite. If anything, the model underestimates the amounts of habitat needed by woodpeckers since it is based only on woodpecker nest tree requirements and does not consider woodpecker forage substrate needs. Furthermore, the model does not consider the nest tree needs of several species of secondary cavity users that require tree cavities in early and mid seral stages. For example, snags are needed in new timber harvest areas to provide nest sites for*

secondary cavity users such as bluebirds, purple martins, and other swallows even where surrounding forested areas have enough snags to serve as nest trees for woodpecker populations.

COMMENT: Identify by alternative how many acres of suitable pileated nesting habitat will be available and its distribution. Do the same for suitable goshawk nesting habitat.

RESPONSE: *Available data does not make such information readily projectable. We believe the key question is species viability or persistence which has been addressed in the SEIS.*

COMMENT: Use the Neitro et al. model to estimate current populations of woodpeckers for all seral stages and allocations. Weight the estimated population levels by acres of each seral stage to obtain an overall population level. Display those data.

RESPONSE: *The analysis was accomplished in this way. Detailed data are available on request.*

COMMENT: Develop comprehensive prescriptions for managing snags to achieve and maintain the population goal for woodpeckers.

RESPONSE: *The focus of the RMP is its objectives. Prescriptions must be site specific, varying with existing forest stand conditions, broad ecosystem management objectives and, where appropriate, timber management objectives. They will be developed in site-specific plans.*

COMMENT: Assign population goals for woodpeckers for all land allocations.

RESPONSE: *The PRMP allocations compartmentalize much of the landscape outside Late-Successional Reserves into typically small patches of GFMA and connectivity/diversity blocks separated by linear Riparian Reserves. In such a landscape, separable population goals by allocation are meaningless. Over the long term, sizes of snags retained would be suitable for all species although other habitat conditions may influence which species are most abundant. Pileated woodpeckers, for example, are expected to be more abundant in the reserves and northern flickers may be the most abundant woodpecker in the GFMAs.*

COMMENT: Use the snag recruitment model by Neitro et al. to estimate how quickly green trees retained as future snags will actually become snags. Analyze whether potential snag densities will occur in the next 20 years if natural snag recruitment is insufficient. If it is insufficient, prescribe an active program of snag creation.

RESPONSE: *Tree spacings that will result from density management and thinning under the PRMP are expected to forestall natural suppression mortality. There will be some natural recruitment of snags accruing from green trees retained specifically for this purpose. Snag creation through an active program will also be necessary since natural recruitment is not expected to provide enough snags over time. Snag creation through prescriptions will be developed on a site-specific basis.*

COMMENT: Evaluate the resource trade-offs of managing at the 80% population level for woodpeckers, recognizing that the Neitro et al. model likely underestimates woodpecker requirements for snags.

RESPONSE: *The actual overall long-term effects of the PRMP approximates this level.*

COMMENT: The lands should not be managed so intensely as to have to require artificial snag creation to provide viable populations of snag dependent species.

RESPONSE: *Snag creation is planned primarily in the matrix in second growth stands that may be deficient in snags.*

COMMENT: BLM does not adequately address the importance of its proposed management activities on neotropical migrants. Consider the July 1992 study on neotropical migrants in Pacific Northwest national forests.

RESPONSE: *The habitat requirements of the 165 species of neotropical migrants as a group are so diverse as to preclude analysis of the group as a unit. The BLM is in the process of developing a monitoring strategy to begin to acquire the data necessary to analyze the impacts on each species of neotropical migrant. Currently, impacts of the various alternatives are identified for some of these species. Conclusions must be considered preliminary due to the lack of long-term studies.*

COMMENT: Address how logging practices are affecting the pond turtle.

RESPONSE: *A discussion has been added.*

Fish

COMMENT: Specify goals and objectives for fish habitat.

RESPONSE: *Objectives have been added for the PRMP.*

COMMENT: What is termed fish habitat enhancement is actually restoration or rehabilitation.

RESPONSE: *It is enhancement of the current condition, but often is also restoration or rehabilitation.*

COMMENT: BLM proposes a substantial amount of costly stream habitat restoration. Past restoration work in the Northwest has been poorly designed and has done little to reverse declines of many stocks. Future work should be planned on a 3rd-5th order watershed basis, be based on a thorough pre-treatment inventory, have clearly defined goals and objectives, and have a short and long-term monitoring plan. It should not be a substitute for protecting fish/fish habitat from the effects of land management activities and should not be conducted in watersheds where watershed processes are not functioning naturally or where the effects of public and private land management activities combined will render restoration ineffective. It should be prioritized based on the needs of threatened stocks of anadromous fish.

RESPONSE: *Watershed analysis will precede expensive restoration work. An interdisciplinary team will determine actual management prescriptions to achieve watershed standards based on site-specific requirements. It has been determined, however, that simple protection of existing aquatic habitat is not enough. Much of the aquatic habitat in the Pacific Northwest is in a degraded condition, thus, aggressive restoration efforts are necessary if depressed fish stocks are to be rebuilt.*

The BLM has been in the forefront in developing, monitoring and evaluating habitat restoration projects. These projects have been evaluated not just by the BLM, but in cooperation with Oregon State University, Coastal Oregon Productivity Enhancement Program and the Oregon Department of Fish and Wildlife. Evaluation has clearly shown that restoration projects can increase the survival of salmonids from eggs to smolts. However, recovery of the stocks depends on overall management of the stream and estuary habitat, and the harvest in the ocean and rivers. The BLM has no control over management of habitat on non-BLM lands, nor over fish harvest management.

COMMENT: The final RMP/EIS should include a comprehensive stream biological survey; identify watersheds supporting productive or valuable remnant populations or communities of native fishes, amphibians and other aquatic biota; and delineate a well-distributed network of least disturbed watersheds.

RESPONSE: *We recognize the need for this information; however, it is not available at this time nor can it reasonably be acquired in a timely manner for inclusion in the PRMP/FEIS. As a part of implementation of the RMP, we will move to acquire this data. The BLM has recently released a strategy for the management of anadromous stocks in the Columbia and Snake River Basins which has as a central focus watershed level planning. A similar plan has been developed for the coastal areas of the Pacific Northwest and also includes watershed level planning as a central focus. This plan which will be published soon, is a road map of how the BLM intends to manage the fisheries of the region to meet the goals and objectives set forth in the RMP.*

COMMENT: Sensitive and priority aquatic habitat should be identified. Recovery and restoration plans should be developed based on a watershed analysis. In addition, fish habitat and sediment yield should be utilized to establish/predict habitat quality. Summarize subwatersheds where timber harvest emphasis would occur.

RESPONSE: *Priority and sensitive habitats are identified in the FEMAT report and have been taken into account when developing the PRMP. Also see previous response. Sediment yield is not reliably predictable. Watershed analysis will be accomplished eventually on all watersheds and before management actions in key watersheds. Until that level of analysis is complete, it is not feasible to identify subwatersheds where timber harvest emphasis will occur.*

COMMENT: Consider the information on aquatic resources in the Draft Recovery Plan for the Northern Spotted Owl, the Forest Service's strategy entitled PACFISH, and BLM Washington Office Information Bulletin 92-642.

RESPONSE: *We are aware of this information and have considered it.*

COMMENT: Identify and discuss the status of various wild anadromous fish stocks and habitat conditions within whole watersheds, not just BLM-administered portions. What is the relationship between habitat conditions and the severely depressed status of many stocks?

RESPONSE: *We actively seek to cooperate with other landowners in developing and implementing plans for management of aquatic habitat. We are cooperating fully with ODFW efforts to identify and protect genetically unique fish stocks, and with management proposals to protect and enhance salmon and trout communities. However, BLM does not have any control over management of habitat on private lands, which is a state of Oregon responsibility. While we acknowledge that activities on private and state lands may affect habitat on BLM-administered lands, we recognize that private and state lands are managed under state regulations. We have taken these differences into account during impact analysis.*

Habitat condition undeniably plays a role in the depressed status of many stocks; however, many factors other than habitat condition affect fish production (i.e. harvest, ocean conditions, etc.). These factors are not under the control of the BLM. Currently many watersheds are underseeded.

COMMENT: Analysis of impacts on fish is flawed because it fails to consider management activities on private lands, assumes that past damage will improve on its own, and ignores effects from continued timber harvest in upland areas.

RESPONSE: *See previous response.*

A component of the methodology used to establish condition ratings was the related factor analysis. This analysis adjusted the condition arrived at using the vegetation information to account for such related factors as the amount of new and existing roading, soil stability, and adjacent land management practices, to name a few.

COMMENT: The methodology for stream (fish) habitat quality rating is very simplistic and has not been peer reviewed. The conclusions about existing habitat quality are wildly optimistic.

RESPONSE: *We have conducted extensive habitat inventories. Prior to 1980, the Salem District inventoried fish habitat conditions on 194 stream miles. Between 1983 and the present, the district has completed 137 miles of inventory using new, state-of-the-art micro-habitat survey procedures. These new procedures are similar to the survey methodologies used by the Forest Service and the Oregon Department of Fish and Wildlife. Analysis of the information obtained indicates a general relationship between the age and composition of the riparian community and the instream woody structure that creates fish habitat. The relationship is far from absolute, as we are aware, but vegetation is a good general indicator of the overall health of a system. In the absence of detailed data on all streams, we elected to use vegetation information as the best method for approximating stream health. However, this information was not the only information used to establish condition ratings. An equally important component of the methodology was the related factor analysis. See previous response.*

This analysis method has been peer reviewed internally but has not received peer review outside the agency. ODFW has reviewed this methodology and provided helpful comments. We recognize that up-to-date stream inventories are needed but funding has been lacking. The data so far collected was used in developing this methodology.

COMMENT: The Fisheries Productivity Rating System needs further explanation.

RESPONSE: *Refer to Appendix 4G in the Draft RMP/EIS for a description of the methodology used to calculate fish production capability. Data relating fish production capability to habitat condition was provided by ODFW. This data was considered to be the best available information and appeared reasonable when compared to current BLM habitat production capability data.*

Our fish production estimates represent the potential capability only. Many factors other than habitat condition affect fish production (i.e. harvest, ocean conditions, etc.) and actual production will vary as a result of these other factors. Since these factors are not under the control of the BLM the actual fish production under a particular alternative will likely vary from what was predicted. However, the method used does illustrate the relative difference among alternatives, thus providing a basis for management decisions.

COMMENT: Effects on fish should be measured against a desired future condition, not against current conditions.

RESPONSE: *An environmental impact statement normally addresses the changes that alternative courses of action would cause from the present condition. Desired future condition or resource condition objectives, in the planning process, are developed for a specific alternative. They would differ for each alternative. The objectives provide the standards for monitoring the effects of the implementation of the plan, while the current conditions establish the baseline against which the effects on fish by the various alternatives can be measured. Although the FEMAT team made regional comparisons of some of their alternatives against independently derived possible target conditions, those subjective ratings could not be replicated by BLM personnel on a single district basis.*

COMMENT: The tables showing potential fish production capability are unproved, most likely inaccurate, and are misleading.

RESPONSE: *Data used in developing fish production estimates was provided by ODFW. This data was considered to be the best available information and appeared reasonable when compared to habitat production capability data we have collected. However, estimates of future condition for all resources are unproven; the state of the art in resource management make such estimates unprovable . Many factors other than habitat condition affect fish production (i.e. harvest, ocean conditions, etc.) These factors are not under the control of the BLM. Thus, our fish production estimates represent the potential capability only and actual production will vary as a result of these other factors.*

COMMENT: The mechanisms by which the 200-year increase in fish populations would occur are not provided. Acute and chronic stressors such as upstream sediment inputs from unstable slopes, landslides, roads and mining may continue to degrade fish habitat. In addition, migratory species may be limited by habitat utilized at a single life history stage.

RESPONSE: *This has been dropped from the proposed resource management plan.*

COMMENT: Use of the average diameter of trees to predict fish habitat trends is too simplified. Much more detailed information on stream variables related to fish survival is needed, such as substrate imbeddedness, stream temperature, presence of deep pools, dissolved oxygen, sedimentation, etc.

RESPONSE: *These factors were considered when performing the related factor analysis used in combination with the riparian condition method.*

COMMENT: There is no discussion of the very real possibility of loss of viability of some aquatic species, particularly anadromous fish stocks of concern. Consider the recent finding by ODFW that their index of coastal abundance greatly overestimated escapement and the status of wild coho stocks may be bleaker than once thought.

RESPONSE: *We are aware of these findings. The SEIS addressed viability of aquatic species. Although we do not manage species, we are cooperating fully with ODFW efforts to identify and protect genetically unique fish stocks, and with management proposals to protect and enhance salmon and trout communities. The riparian and stream management in the PRMP will be adequate to protect existing habitat and to promote long-term recovery of diminished habitat on BLM-administered lands. However, the fate of many fish stocks will be influenced more by activities on other land ownerships and by regulation of fishing. Funding priority for rehabilitation and restoration efforts will reflect stock status.*

COMMENT: Identify how closely the expected condition of the fishery resource will approach maximum potential.

RESPONSE: *It is not possible to determine what the maximum potential is and the BLM does not control all factors affecting fish production.*

COMMENT: The lands in the suitable timber base classified as fragile likely represent only the BLM's most erosive and landslide prone areas. Additional fragile lands occur throughout the Coast Range, making most logging and road building potentially hazardous for fish habitat.

RESPONSE: *The most erosive and landslide-prone areas fall into Timber Production Capability Classification (TPCC) categories excluded from planned timber harvest. The potential hazards of TPCC categories available for harvest are taken into account during the design of timber sales and associated roads and appropriate measures incorporated to minimize impacts. For further discussion, see previous comment responses on Soils/ Site Productivity.*

Special Status Species

COMMENT: Note the current status of species-specific management plans. Clarify whether site-specific management plans will be develop for the bald eagle and peregrine falcon, and when.

RESPONSE: *Site-specific management plans termed Conservation Agreements are being developed for Special Status Plants. These are interagency plans developed between BLM, USFS and USFWS, which identify and schedule specific management actions to prevent listing and to conserve these species. One plan for Aster gormanii for the Salem District has been completed. For animal species such as the bald eagle and peregrine falcon, the objectives of recovery plans will be the basis of BLM management. Watershed analyses will also result in the compilation of some species-specific data that will be useful in managing wildlife species.*

COMMENT: Indicate what measures (inventories, buffers, site-specific management plans, consultation with the Fish & Wildlife Service, etc.) will be implemented to assure that actions such as timber harvest, road construction, grazing, and recreational use and development do not adversely affect listed species.

RESPONSE: *Federally listed species or habitat will be managed in compliance with the Endangered Species Act and BLM national and state office policy which will include conferencing and consultation with the U.S. Fish and Wildlife Service. For species with completed recovery plans, management activities will be consistent with the plans' objectives. Inventories and identification of buffers, seasonal restriction, and other project modifications are part of the process to ensure that actions are in compliance.*

COMMENT: Identify the species expected to benefit from the OGEAs and how the OGEAs will contribute to habitat, forestalling listing, and/or delisting of each species.

RESPONSE: Reserves were not specifically intended to benefit special status plants. All special status plants, except for Assessment Species, will be managed in a way that will not contribute to the need to list, regardless of land allocation.

In general, species that will benefit from the Late-Successional Reserves are those whose daily and annual life cycle needs require habitat components provided in late-successional conifer forests. SEIS Special Attention Species closely associated with late-successional forests are identified in appendix F. In addition, chapter 3 discusses habitat requirements of Special Status Species. Some of these are currently federal-listed species, some are candidates for listing and others are not now nor probably will ever be in need of listing protection, but all benefit from the habitat conditions inherent in the Reserves. For example, the Reserves follow the intent of the Designated Conservation Areas of the Final Draft Northern Spotted Owl Recovery Plan. This plan and its components are designed to recover the spotted owl populations, but also provide habitat for a host of other species where the occurrence is in common. The Late-Successional Reserves are large tracts that will eventually have significant acreages of older forest. Species such as the marbled murrelet, goshawk, bald eagle (where the Reserves are near water bodies), salmonid fishes, and numerous species of small mammals, birds and amphibians will be able to sustain populations in these areas. A given Reserve may contain several populations of a given salamander species while for more far-ranging species such as the goshawk and spotted owl it may require multiple Reserves to serve the needs of a population. Key items in the Fish and Wildlife Service's review of whether a species should be listed or delisted are whether the habitat of the species is being lost and whether there are regulatory mechanisms in place to protect the species. The Reserves serve as cornerstones for meeting both of these items of concern and thus should weigh heavily in the listing/delisting considerations. The viability ratings in the SEIS also provide an indirect identification of species expected to benefit.

COMMENT: The federal status of several species is incorrectly noted.

RESPONSE: *The special status species list has been corrected and updated.*

COMMENT: Consultation under the Endangered Species Act regarding effects of activities on mining claims on federally listed threatened and endangered species is the responsibility of BLM.

RESPONSE: *Consultation with USFWS for mining is the responsibility of the claimant if there is a notice of intent in place. It is the BLM's responsibility if there is a plan of operation filed. However, we would certainly be in contact with the USFWS in both cases, regardless of responsibility for consultation.*

COMMENT: A minimum viable population of a species is on the brink of catastrophe. Managing special status species for populations above the minimum is recommended.

RESPONSE: *Our goal is to manage for healthy populations of all fauna and flora, including special status species, by employing policies, land use allocations, and management direction that will ensure stable populations.*

COMMENT: Inventory sensitive wildlife species.

RESPONSE: *Inventories are an ongoing process but are not a standard decision element of an RMP. Wildlife inventories are very expensive and thus subject to budget constraints.*

COMMENT: The DEIS violated NEPA by failing to adequately analyze the effects of the RMP on marbled murrelets, songbirds, declining amphibians, western pond turtles, many important species of plants sensitive to disturbance and candidates for the endangered species list.

RESPONSE: *In the RMP/EIS, those effects are analyzed at a level of detail consistent with what is known about the habitat needs of the many species at issue. They are also analyzed in the SEIS. Monitoring is a critical component of the RMP and will increase our knowledge of habitat needs. This information will be used to adjust management strategies whenever necessary in order to ensure that management objectives are achieved.*

COMMENT: Provide clear direction for site-specific protection of other Oregon sensitive (wildlife) species. The preferred alternative should contain allocations and management standards for bald eagles, peregrine falcons, wild turkeys, Townsend's big-eared bats, great blue herons, and band-tailed pigeon mineral springs. It should also commit to develop site specific habitat management plans for each known site and other sites as they are found.

RESPONSE: *The PRMP contains management direction for various wildlife species. In many cases, allocations such as reserves and special management areas, will provide habitat for wildlife species. The concept of ecosystem management is to provide habitat sufficient to meet the needs of all wildlife species rather than to provide species-by-species allocations. Chapter 4 provides species by species discussions of how the allocations will serve the species. Where the RMP allocations and prescriptions are not sufficiently detailed to guide management of these species, a habitat management plan will be prepared.*

COMMENT: The treatment of marbled murrelets is inadequate.

RESPONSE: *The discussion of marbled murrelets is expanded in the PRMP/FEIS.*

COMMENT: Commit to a process for identifying all marbled murrelet nesting habitat and flight corridors, in consultation with the US Fish and Wildlife Service. Help fund and accelerate research on murrelet use of BLM-administered habitat.

RESPONSE: *Provisions in the PRMP call for general inventories of BLM-administered lands for murrelets. Additionally, all proposed project areas will be surveyed according to protocol for murrelets (which requires two years of site visits) prior to implementing any projects. All lands where murrelet occupancy is confirmed will be unavailable for planned timber harvest. Research on marbled murrelets is a priority.*

COMMENT: Clearly state the impacts on marbled murrelet habitat on BLM lands, not merely the overall future conditions on all lands.

RESPONSE: Impacts to the identified marbled murrelet habitat on BLM-administered lands are specifically addressed in Chapter 4.

COMMENT: Analysis of murrelet habitat loss should consider areas of mature forests with some old-growth trees as possible murrelet habitat.

RESPONSE: *The definition of potential marbled murrelet habitat includes mature stands with scattered old growth trees, thus that acreage was included in the analysis of effects.*

COMMENT: All potentially threatened stocks of wild anadromous fish on BLM-managed lands should be included on the list of special status species.

RESPONSE: *This has been accomplished in chapter 3.*

COMMENT: Take a more active role in improving habitat for sensitive fish species and stocks. Describe more completely how the preferred alternative will affect sensitive fish stocks and how adverse impacts would be mitigated.

RESPONSE: *The BLM does not manage species or communities; we do manage the habitat on which these species depend. We are cooperating with ODFW efforts to identify and protect genetically unique fish stocks, and with management proposals to protect and enhance salmon and trout communities. Habitat restoration is an important component of the PRMP. We also have a monitoring program for salmon and steelhead.*

COMMENT: Identify all existing sites for listed and candidate plant species. Work with other state and federal agencies to prioritize their study and monitoring.

RESPONSE: *Sites for listed and candidate species are mapped on our GIS. As new sites are discovered through inventory they will be added to the GIS. Inventory will continue throughout the life of the plan. Extensive coordination already occurs with state and federal agencies and private organizations. Memoranda of Understanding and/or Cooperative Agreements have been developed with the Oregon Department of Agriculture, the Oregon Natural Heritage Program, The Nature Conservancy, and the Center for Plant Conservation.*

In addition to memorandums of understanding and cooperative agreements, interagency management plans called conservation agreements are being developed between all federal landowners throughout a species range. Cost share agreements are in place for studying and monitoring many listed and federal candidate plant species.

COMMENT: Discuss the effects of management alternatives on special status plant species similarly to the discussion of effects on special status animal species. Bureau sensitive plant species get too little attention. Use the ONHP list for identifying habitats of plant species that could be come threatened or endangered.

RESPONSE: *Special status plants are not discussed individually because of the large number of special status plants and the limited amount of information available on their biology. More research is needed before more can be said. The ONHP list provides only species names and status and can not be used to identify habitats. Location information for the District which is stored in the ONHP Element Occurrence Database was provided for the most part by BLM personnel. Location information is exchanged between the ONHP and the BLM on an annual basis under a Memorandum of Understanding and Cooperative Agreement.*

COMMENT: All plant species on the Oregon Natural Heritage Program sensitive list should be considered in the RMP/EIS. Standards addressing the protection of ONHP sensitive species and their habitats should be included in all land use allocations. The orientation of management for sensitive species should shift from individual species and habitats to ecosystems.

RESPONSE: *Plant species occurring on BLM-administered land which are identified as threatened or endangered on the ONHP's sensitive lists are addressed in the PRMP. Species on the ONHP's four sensitive lists have widely varying needs for management. The BLM Oregon State Office special status species policy includes all plant species in the ONHP lists, according different levels of attention based on the species' sensitivity. Plant species on BLM-administered land which are threatened or endangered throughout their range (ONHP List 1) are federal candidate or bureau sensitive species; those threatened or endangered in Oregon but more stable or abundant elsewhere (List 2) are BLM Oregon/Washington assessment species and are addressed in the RMP. Plant species on List 3 ("review") and on List 4 ("watch") are BLM Oregon/Washington tracking species. They are identified by ONHP as species needing more information (List 3) and as being of concern but not presently threatened or endangered (List 4). When funding permits, we would collect information on tracking species but special management is not planned.*

The PRMP provides management direction for those species considered in jeopardy of extinction and in need of special management attention. This includes federal listed, federal proposed, federal candidate, state listed, and bureau sensitive species. These species were identified from U.S. Fish & Wildlife Service lists of federal listed, proposed, and candidate species, state of Oregon lists of state listed and candidate species and ONHP lists. Management strategies for special status plants do not vary with land use allocation in the PRMP. The PRMP will provide for ecosystem management to protect special status species.

COMMENT: To follow state and federal guidelines, rare plant habitats should be "protected" rather than "managed".

RESPONSE: *Proposed management prescriptions are in full compliance with all state and federal guidelines. "Protection" alone will not be sufficient for maintaining many plant species. Active management such as prescribed fire may be necessary to maintain or restore the structure and function of certain plant habitats.*

Spotted Owl

COMMENT: There is no scientific evidence that the forest structure needed as spotted owl habitat can be grown over time using long rotation forestry.

RESPONSE: *Although the evidence may not be complete, there is promise that long rotation forestry may produce suitable spotted owl habitat. For that reason the BLM has initiated research to aid future forest managers who will deal with the issue in the next century. The BLM will maintain all suitable habitat in Late-Successional Reserves and foster old growth forest conditions in the current young forests in the Late-Successional Reserves as they mature.*

COMMENT: Address management direction for timber sale areas exempted by the Endangered Species Committee in 1992.

RESPONSE: The BLM will not pursue the harvest of any of the previously planned timber sales exempted by the Endangered Species Committee. Harvest may occur at a future time on the same land acres, but the prescriptions will not jeopardize the continued existence of the spotted owl or any other federal-listed species.

COMMENT: Identify the standards under which known spotted owl nest sites will be protected.

RESPONSE: *At a minimum, at least one center of activity at all known sites of resident single and territorial pairs of northern spotted owls known as of January 1, 1994, will have up to 100 acres of the best available surrounding habitat excluded from timber harvest. Obviously, sites that fall within Reserves or Special Management Areas would have more acres protected surrounding the site.*

COMMENT: Clarify whether surface occupancy for mining activities will be allowed in northern spotted owl sites.

RESPONSE: *As a general rule disturbances, such as surface occupancy, would not be authorized within 0.25 miles of a northern spotted owl site. This will however vary by site and by season of the year so it is not an absolute exclusion. In instances where the mining activities can occur in harmony with the owl occupancy of the site, efforts will be made to accommodate the mineral resource use.*

COMMENT: BLM proposed inappropriately to provide connectivity for spotted owls by managing connectivity areas.

RESPONSE: *The purpose of connectivity/diversity blocks is to serve a variety of wildlife species, not only spotted owls. Connectivity/diversity blocks, along with other allocations such as Riparian Reserves and Special Management Areas, are expected to mix with the General Forest Management Areas to provide for dispersal of many species including spotted owls.*

COMMENT: Explain how the connectivity areas compare to the 50-11-40 rule outlined in the ISC report.

RESPONSE: *In five or six decades, management of BLM-administered lands within a quarter township in a connectivity-diversity block will meet or exceed 50-11-40. In the short term there will be quarter townships where this is not true but in these areas conditions will not decline and recovery will occur in future decades.*

COMMENT: The adequacy of connectivity areas for spotted owl dispersal should be demonstrated.

RESPONSE: *That can only be demonstrated through monitoring. Given other requirements of the plan, it may be impossible to isolate the effects of connectivity/diversity blocks.*

COMMENT: Several activities are proposed in deferred OGEAs that appear inconsistent with the draft spotted owl recovery plan. These include density management in older second growth and large scale salvage.

RESPONSE: *OGEAs have been dropped from the PRMP. Activities in Late-Successional Reserves must be beneficial to the spotted owl and pass review under the auspices of the Regional Ecosystem Office.*

COMMENT: The potential effects of low habitat, low population and reduced dispersal, on the survival of the spotted owl should be addressed.

RESPONSE: *A discussion of this subject has been added to chapter 4.*

COMMENT: Assess the viability of the spotted owl under the preferred alternative, in the short term, at the lowest point in habitat development, and in long term.

RESPONSE: *An assessment of the viability of the spotted owl included in the SEIS, is referred to in chapter 4 of the PRMP/FEIS.*

COMMENT: Evaluate the effects of the plan on designated critical habitat.

RESPONSE: *An assessment of the effects of the plan on designated Critical Habitat has been added to the analysis of effects. No actions will be implemented that will result in the destruction or adverse modification of Critical Habitat.*

COMMENT: The discussion of the discrepancy between the spotted owl population model's projection of current population and the observed population should include problems with the model.

RESPONSE: *Since SEIS Appendix J superseded our analysis, we have not rerun the McKelvey model for analysis of the PRMP except to acknowledge and reference the SEIS analysis.*

COMMENT: Assess the risk that density management would negatively affect suitable spotted owl habitat.

RESPONSE: *There is no density management proposed in suitable owl habitat in the Reserves or in occupied residual habitat areas in the matrix. Otherwise, owl habitat in the matrix is available for management, and loss of habitat over time in the matrix is acknowledged.*

COMMENT: Evaluate the level of risk to the stability of spotted owl populations under the preferred alternative.

RESPONSE: *The Chapter 4 discussion has been expanded to describe risk in general terms. The SEIS evaluates risk from the (new) PRMP as it integrates with other Federal plans.*

COMMENT: Provide information on the quality and distribution of suitable spotted owl habitat after 100 years. Identify the extent to which the development of future habitat is dependent on the ability to create or speed its development through silvicultural practices.

RESPONSE: *Information on the acreage of suitable habitat expected on BLM-administered lands after 100 years is provided in tabular form in chapter 4. The development of quality habitat is dependent on time. The younger stands of today that hold the key to habitat recovery will be 100 to 140 years of age in 100 years. In this age range, stands are beginning to move from primarily foraging substrate to high quality foraging and nesting habitat. The role of density management is to diversify the stands structurally so that they might attain the higher quality status at approximately 120 years of age. The silvicultural practices serve as an enhancement technique that, if it is successful, will bring habitat on line faster. If it is not successful, however, stand development could be retarded and the time till habitat conditions were reached could be lengthened. Many of the answers to questions on this topic are unknown at this time, but the objective is to apply the management prescriptions over time within an adaptive management framework.*

COMMENT: Discuss the capability of OGEAs, and the management proposed within them, to maintain population levels sufficient to provide internal stability within them.

RESPONSE: *This capability, in relation to Late-Successional Reserves, has been fully addressed in the SEIS.*

COMMENT: Given the lack of experience in developing and maintaining old growth characteristics capable of supporting viable populations of spotted owls and the lack of detailed knowledge on the components of structurally diverse forest important to spotted owls, the prediction that as much as 40 percent of the OGEAs may be subject to density management increases the risk of catastrophic failure of the network concept. Evaluate the risk of failure of the techniques and the potential impact on the species of such a failure.

RESPONSE: *The Chapter 4 discussion has been expanded to address this concern as it now relates to Late-Successional Reserves, and it is addressed in the SEIS.*

COMMENT: Specifically assess the effects of the preferred alternative on spotted owls in the Coast Range province.

RESPONSE: *This is fully addressed, province-wide in the SEIS.*

COMMENT: Indicate how spotted owl dispersal will be maintained.

RESPONSE: *Dispersal habitat for owls will be provided by the vegetation pattern and condition inherent in the management allocations and prescriptions of the Late-successional Reserves, Riparian Reserves, Special Management Areas, Connectivity/diversity Blocks and the General Forest Management Areas.*

COMMENT: Provide rationale or documentation for the statement that isolation is not thought to be a factor under the preferred alternative.

RESPONSE: *The issue of isolation of segments of the population was addressed in the Final Draft Recovery Plan for the Northern Spotted Owl and was accounted for by the size and arrangement of Designated Conservation Areas and the management of the matrix between them. The PRMP adopted the reserve system identified in Alternative 9 of the SEIS and will manage the intervening Special Management Areas, connectivity/diversity blocks and General Forest Management Area lands to ensure adequate survival and movement of young owls.*

COMMENT: Discuss the impact of the preferred alternative on all quarter townships, not just those in connectivity areas. Evaluate how the deficient (re the 50-11-40 rule) quarter townships are distributed and how their location affects inter- and intra-provincial dispersal.

RESPONSE: *The discussion of dispersal habitat under the PRMP addresses dispersal on lands outside the late-successional reserve system.*

Special Areas

COMMENT: Protection of ACECs instead or additionally as Outstanding Natural Areas (ONAs) is needed to assure truly meaningful agency protection.

RESPONSE: *Outstanding Natural Area is a recreational designation (CFR 8352.0-2) and is not be appropriate for all ACECs. The Federal Land Policy and Management Act requires protection of all the relevant and important natural features for which an ACEC is designated. ACEC designation provides adequate protection under existing law and policy. Secondary designations such as RNA or ONA have been provided for some ACECs only to clarify management objectives.*

COMMENT: All ACECs should be posted to prevent unintentional use, and should be closed to off-road vehicle use.

RESPONSE: *Posting and other protective measures will be undertaken for each ACEC, commensurate with values at risk, threats from inappropriate uses, and physical and biological factors. Actions taken to prevent*

unintentional uses will depend on the primary values for which an ACEC was designated and will be developed during watershed analysis and/or project planning after completion of the RMP.

COMMENT: A stronger policy is needed to prevent the harvesting of "minor forest products" from special areas.

RESPONSE: *A stronger policy has been developed for minor forest products, which are now referred to as special forest products. The discussion of them has been expanded. See chapter 2, Special Forest Products.*

Cultural Resources

COMMENT: The cultural resources discussion does not accurately address governmental bodies of federally recognized Indian tribes.

RESPONSE: *The text has been revised to identify such bodies by the appropriate names or collectively refer to them as "federally recognized Indian tribes" or as "Indian nations."*

COMMENT: The cultural resources section of the document should include interaction and consultation with appropriate tribal governments regarding cultural/archeological issues.

RESPONSE: *The chapter 2 discussion of Cultural Resources has been expanded to address these interactions. The provision of the draft RMP to the tribal governments is regarded as the first step in the consultation process. Further interaction and consultation regrading site-specific actions of tribal interest can be initiated either by the tribe or by the BLM as tribal concerns are identified. BLM has suggested (and is in the process of consulting about with each of the tribal governments) the development of Memoranda of Understanding that will encourage more interaction and consultation between the tribal governments and the BLM.*

Visual Resources

COMMENT: Describe existing visual conditions along major highways, identify those segments appropriate for visual management, and direct management plans to achieve expected future conditions.

RESPONSE: *BLM-administered lands have been inventoried, evaluated and assigned inventory classes based on their relative worth from a visual resource management point of view. Chapter 3 describes the results of the inventory process. The alternatives recommend various classes of visual resource management for BLM-administered lands including lands along major highways. Each visual resource management class has objectives (See chapter 2) and these objectives are used to identify management prescriptions that would maintain, enhance, or preserve scenic values.*

COMMENT: Long-term visual management objectives should consider the use of silvicultural practices to accomplish the VRM objectives.

RESPONSE: *Such practices will be used in VRM class II and III areas, where consistent with land use allocations protective of other resources. See PRMP Management Actions/Direction.*

COMMENT: Work with adjacent landowners and others to maintain visual continuity.

RESPONSE: *BLM has authority or responsibility for visual resource management only on BLM-administered lands. We will work with interested adjacent landowners to coordinate visual resource management primarily during watershed analysis.*

Wild and Scenic Rivers

COMMENT: State whether BLM land management actions that could impact designated State scenic waterways will be coordinated with the State.

RESPONSE: *This coordination will occur in accordance with the Memorandum of Understanding for River Management between BLM, the Forest Service, and the Oregon Parks and Recreation Department.*

COMMENT: Clarify how technical procedures were used by BLM to determine wild and scenic river suitability.

RESPONSE: *Although a number of explicit technical criteria were used to determine which rivers would be found suitable under alternatives A, B, C, D, and E, the suitability findings in the PRMP were based on a more subjective weighing of these criteria plus public comment on the various rivers.*

COMMENT: Consider the following additional criteria in suitability determinations.

a. Aggregated values of a given stream.
b. Importance of aggregated values on both a statewide and SCORP regional level.
c. Importance of smaller "less stellar" streams to program.
d. Non-local as well as local support for a given stream.

RESPONSE: *These factors were considered in the PRMP.*

COMMENT: How is it possible to recommend a given eligible river segment for national wild and scenic river status in one alternative and not in another?

RESPONSE: *To show a range of alternatives the variation is based on the relative importance attached to economic tradeoffs, quality of the river segments, and manageability of outstandingly remarkable values by BLM. The purpose of alternatives is to consider varying management direction and resource allocations.*

COMMENT: Wild and scenic river suitability is not based on a "Top Four" recognition.

RESPONSE: *The "top four" assessment was used to structure alternatives B, C and D but was not directly used in the suitability findings process for the preferred alternative (Draft RMP/EIS) or the PRMP.*

COMMENT: The cursory suitability studies in the RMPs do not fulfill the BLM policy requirement. It is especially important to evaluate degradation to ORVs should a river not be given wild and scenic status.

RESPONSE: *The wild and scenic river assessment reports in appendix 2-L of the Draft RMP/EIS were prepared in accordance with BLM policy. Probable degradation of ORVs, should a river not be given wild and scenic status, is addressed in the section of each report titled Effects on Outstandingly Remarkable Values.*

COMMENT: Another management option does not preclude wild and scenic status. RMPs are not permanent and will no doubt change. BLM should protect those rivers deserving of such status.

RESPONSE: *The suitability findings considered all those aspects of the question.*

COMMENT: The alternative management options for "not suitable" rivers may not give them protection comparable to wild and scenic status.

RESPONSE: *The "not suitable" rivers were all found to be eligible for recreational classification only. Proposed riparian reserve widths on these segments are approximately 400 feet on each side of the stream, subject to some modification after watershed analysis. These widths and other management direction outside the riparian reserves would provide comparable or better protection than that envisioned by the Wild and Scenic Rivers Act for the portions of these river segments crossing BLM-administered lands.*

COMMENT: All values on eligible rivers should be maintained at their current level until Congress acts.

RESPONSE: *Neither the Wild and Scenic Rivers Act nor any related policy suggest that an agency's negative suitability determinations on eligible rivers will be referred to Congress for action. The standard protocol is that*

the agency's negative determination resolves the issue.

COMMENT: How long will interim management occur on eligible rivers not studied in the RMP.

RESPONSE: Since BLM has no plan to study these rivers and neither does any other agency, interim management may last a long time.

COMMENT: Interim guidelines for eligible wild and scenic rivers result in de facto designation and management of those rivers in violation of the Wild and Scenic Rivers Act and FLPMA. Further, the interim guidelines exceed the Department of Interior's own regulations by excluding timber management activities along these rivers.

RESPONSE: The de facto designation is only for the period until suitability is determined or, if found suitable, a river's status is settled by legislation. This is consistent with FLPMA and in accordance with the Wild and Scenic Rivers Act. Timber management activities are excluded within the 1/2-mile-wide corridor for protection of such rivers only if they are eligible for wild classification.

COMMENT: The simple fact that a river has anadromous fish, scenic or recreational qualities does not qualify it as eligible for further study under the Wild and Scenic Rivers Act.

RESPONSE: True. The values must be found to be "outstandingly remarkable" under the terms of the Act.

Recreation

COMMENT: Coordinate with State and local government on actions which may influence the Regional Strategies and Community Initiatives programs. Develop a multiple agency recreation planning program to promote recreational development and tourism.

RESPONSE: Such coordination is provided for in the plan and discussed where relevant but specific multiple agency planning is an implementation planning process function, not a part of the RMP.

COMMENT: Develop trail plans.

RESPONSE: Trail plan development is a part of project planning which would follow RMP completion and watershed analysis.

COMMENT: Include provisions for designating areas to meet off-road vehicle demand.

RESPONSE: BLM policy states that off-highway vehicle use is acceptable wherever it is compatible with established resource management objectives. BLM-administered lands remain open to such use unless specifically closed or limited. After completion of the RMP, the district will develop an OHV implementation plan with more specific management provisions.

COMMENT: Strengthen standards and guidelines for ORV use.

RESPONSE: Those guidelines are contained in the bureau's regulations (43 CFR 8340). Revision of those regulations is beyond the scope of the RMP.

COMMENT: Use of the term "off-road vehicle, rather than "off-highway vehicle," implies that vehicles leaving roads or trails is OK, which is not so.

RESPONSE: The term has been revised to off-highway vehicle.

COMMENT: Incorporate the ROS rating system into the final plan.

RESPONSE: *Due to the fragmented land ownership pattern and the density of the existing road system on BLM-administered lands in the planning area, ROS is considered largely irrelevant to BLM decisions there. ROS concepts will be used at the watershed analysis and/or activity planning stage for specific land areas where appropriate.*

Timber - Management Direction/Practices

COMMENT: Timber supply does not appear to be an important part of alternative formulation.

RESPONSE: *Timber supply was a consideration, both in the RMP/EIS and the SEIS. Since timber supply concerns paralleled concerns regarding socioeconomic conditions, which had higher visibility, its role in the formulation of alternatives was less visible.*

COMMENT: Discuss the Bureau's willingness to accept "departure" from nondeclining yield. If management in OGEAs is modified in the future, then harvest in future decades will change.

RESPONSE: *Implicit in any decadal or other cyclical planning process is that management guidelines will change when the plans are revised. New information from research and monitoring and new legislation and policies may drive such changes. In subsequent planning cycles, the identified sustainable harvest may decline or increase, but is unlikely to stay the same. That perception does not make the currently estimated sustainable timber harvest a "departure". A departure is a deviation from currently estimated sustainable levels.*

COMMENT: Explain the rationale for minimum harvest ages.

RESPONSE: *The minimum harvest age is the youngest age at which a forest stand would be considered for regeneration harvest in the harvest scheduling model. Minimum harvest age may be set equal to or less than the target rotation age. A younger minimum harvest age is used where there are few available acres of stands at or above rotation age, but an abundance of younger merchantable age classes. This is the case in the GFMA portion of the Columbia Sustained Yield Unit of the Salem District, where the minimum harvest age for the first decade is set at 60 years. Use of this short term reduction in harvest age provides the flexibility to begin moving the managed portion of the forest toward a long-term balance in age class distribution and forest condition. In the long term, most regeneration harvest would take place at or above the target rotation age.*

COMMENT: The RMP calls for harvest of one-quarter of the stands 100 to 200 years old during the next decade, a rate not sustainable.

RESPONSE: *The requirement that harvest be sustainable is applicable to harvest from all age classes combined, not to separate age class groups. The PRMP will harvest some 51,300 acres or about 12 percent of BLM-administered land in the Salem District. Projections indicate that during the first decade, approximately 4,400 acres of stands 100 to 200 or more years of age would receive regeneration harvest. This is about 4.4 percent of the acreage of such stands on BLM-administered lands in the Salem District.*

COMMENT: There are no provisions for phasing down timber harvest levels. BLM should consider a one-decade departure from the non-declining harvest level.

RESPONSE: *BLM's sustained yield mandate makes no provision for such a phase down of planned harvest (PSQ). BLM lacks such authority, other than for a departure which would cause a negligible subsequent drop below sustained yield levels. The stand conditions on lands available for timber harvest in the PRMP, and overall plan objectives, would cause any significant departure to result in substantial drop in sustained yield levels in future decades.*

COMMENT: The practicality is questionable of logging patches of five acres or less and of leaving a few green trees per acre (which might be genetically inferior but would likely overstock planted regeneration areas if not blown over first).

RESPONSE: *Because of the network of Riparian Reserves criss crossing Matrix lands, regeneration harvest units under the PRMP would often be small and scattered, or long and narrow. This would result in higher logging costs, but in most cases, harvest is expected to be economically feasible regardless of unit size. Reserved green trees would include some of the larger diameter trees in the stand, and would not necessarily be genetically inferior. It is expected that seed from the reserved trees will often contribute to reforestation of harvested areas.*

COMMENT: It is inappropriate to include "deferred" old growth areas and watersheds in the timber harvest assumptions.

RESPONSE: *The O&C Act requires BLM to identify the sustainable harvest level. There are no longer any "deferred" areas.*

COMMENT: Lack of trained silviculturists may be a barrier to implementing the proposed silvicultural activities.

RESPONSE: *We recognize a need to modify our skill mix and provide or obtain additional training.*

COMMENT: More detailed silvicultural prescriptions are needed.

RESPONSE: *Due to the somewhat experimental nature of many prescriptions, they must be adaptive and variable from site to site, as we learn from our own experience and that of others attempting active ecosystem management.*

COMMENT: It is difficult to determine how proposed silviculture will actually influence stand growth, yield and structure.

RESPONSE: *While silviculture is not an exact science, there is a considerable body of literature documenting the growth, development and yield of Pacific Northwest forest stands under a variety of management regimes. We believe that the state of the art is such that the general results of silvicultural manipulation of the young stands can be predicted with a reasonable degree of confidence. The outcome of any specific treatment is not certain. Thus the adaptive management approach will be used to continuously refine and adjust silvicultural practice to better attain management objectives.*

COMMENT: Use of formaldehyde as a binder in fertilizers is illegal.

RESPONSE: *The use of formaldehyde in fertilizers is not illegal. When selecting products for use, federal agencies screen for the presence of formaldehyde and select products without it if they are similar in effectiveness. For aerial fertilization, only pelletized fertilizers are considered highly effective because their weight carries them through the canopy to the forest floor. The only binder commonly used for pelletizing is formaldehyde, which forms urea into hardened crystals that not only prevent dusting but protect against caking and provide slow release of the fertilizer.*

COMMENT: The court injunction on BLM's use of herbicides has not been lifted.

RESPONSE: *As long as the injunction remains in place, herbicides will not be used. The probable sale quantity (PSQ) is not dependent on the use of herbicides, but in the absence of their use on a long-term basis, costs of management would increase.*

COMMENT: The plan makes no allowance for failure to meet timber production goals that hinge on the success of intensive management practices. Past efforts to increase yields through intensive management have fallen short of expectations.

RESPONSE: *During the period 1984-1992, the BLM's investments in intensive management practices supported only 90 percent of the planned timber sale volume, but 117 percent of the timber volume actually offered*

for sale. Under the PRMP, timber sale volumes would be reduced below the PSQ if investments in timber management drop significantly below planned levels.

The use of intensive management practices such as precommercial thinning, fertilization, and genetic selection will increase the amount of harvestable timber available in the future. This will be important because a greater proportion of future harvest will be derived from density management and commercial thinning.

COMMENT: The ASQ should be reduced to reflect realistic assumptions for funding intensive management practices.

RESPONSE: *Annual timber sale levels will be adjusted to reflect any sustained shortfall in funding for the intensive management practices on which the PSQ is partly contingent. The PSQ itself properly estimates the level of harvest that is biologically sustainable given the agency's management direction.*

Timber - Productivity/Sustainability/Forest Health

COMMENT: Set specific goals and objectives for forest health, detailing how proposed management strategies will address it and what measures will be implemented to improve unhealthy forest conditions.

RESPONSE: *Ecosystem (forest) health was defined by FEMAT as the state of an ecosystem in which processes and functions are adequate to maintain diversity of biotic communities commensurate with those initially found there. As such the concept includes the condition and characteristics of stands and landscapes we considered under the topic of Biological Diversity and Ecological Health. General forest health and ecosystem diversity and function goals were set as part of the PRMP. The result of application of these goals at the planning level and the extent to which the plan alternatives will result in forests which are within the range of natural conditions is described in Chapter 4. Further analysis will occur in watershed analysis.*

COMMENT: Assess forest health issues, particularly the role of salvage operations.

RESPONSE: *Salvage operations will harvest the result of accelerated mortality of trees caused by poor forest conditions in periods of drought or other environmental stress. Attainment of higher levels of forest health will result in mortality declining to levels which are normal for relevant seral stages. Salvage does not by itself have a positive ecological effect and may have a negative effect if carried to excess.*

COMMENT: The BLM plans timber harvest rotations of 60 years, close to the rotation period the FORCYTE-II model suggests is unsustainable.

RESPONSE: *The FORCYTE-II model suggests that harvest rotations of less than 50 years would be unsustainable, particularly when accompanied by moderate intensity slash burning, and with added nitrogen fertilizer. The proposed plan would harvest some timber as young as 60 years of age during the first decade, but all subsequent harvest would occur at stand age of 70-80 years or more. Moreover, not all harvest areas would be burned, and many of the burns would be of light intensity. Most stands in the General Forest Management Area would be fertilized in conjunction with thinnings. Projections indicate these harvest cycles would be sustainable.*

COMMENT: Failure to retain the large old insect resistant trees has been attributed to much of the forest health problems presently being experienced in the Northwest.

RESPONSE: *Resistance to insects is a function of tree/forest vigor more often than size or age of individual trees. Vigorous low density widely spaced trees rarely succumb to insect problems. In stands where density is greater than long term site potential to support vegetation during drought periods the vigor of trees is lower. Insects, disease or fire thin out the most susceptible trees.*

Size of trees is a factor in resistance to natural disturbance regimes such as frequent fires that reduces forest density by killing trees with thin bark and/or foliage that provides fire-ladders. Older trees are insulated from such

thermal intrusion and normally have elevated tree crown bases. Selective harvesting of older-larger sized trees or removing older stand components has contributed to homogenous stands in fire prone areas, lowering overall stand fire resistance and thus patch survival following catastrophic events.

Not permitting fire to play its traditional (natural) function has had a significant impact on eastern and western Oregon. In fire-prone areas removal of the large fire resistant trees has also contributed to problems in implementing underburning to reduce density of brush/hardwoods/understories of confers. In moderately to very dense stands the recent drought cycle has placed some of the largest trees within these stands at risk since they have not been able to compete successfully for limited soil moisture. Once weakened or killed by drought, they are readily attacked by insects.

COMMENT: Existing conditions of insects and diseases are not addressed or are superficially addressed and quantitative data are not included. Little or no effort is made to project effects of new management practices on future insect and disease impacts.

RESPONSE: *This is an emerging issue that was not identified during scoping of the plan. Consequently, previous inventories did not address such existing conditions. These concerns are part of the focus of ecosystem management, but too little is known for us to forecast comparative outcomes. As we learn more, our management will adapt.*

COMMENT: The plan indicates that a control methods will be applied to insects and pathogens if large outbreaks develop. A prevention approach, never allowing outbreaks to develop, is preferable.

RESPONSE: *A preventive approach is preferred for insect and pathogens as well as dealing with competing vegetation and animal damage. Identifying ecosystem potentials, using density management and underburning appear to be the preferred prevention/control method.*

COMMENT: Forest health is not defined.

RESPONSE: *Discussion has been added to chapter 3, which includes a definition.*

Timber - ASQ/PSQ

COMMENT: Include a discussion of the ASQ philosophy and identify whether the ASQ is a goal or a mandated level of timber production.

RESPONSE: *A discussion has been added to the introduction to Chapter 4.*

COMMENT: Clarify growth and yield assumptions.

RESPONSE: *A general description of growth and yield assumptions and the modelling procedure used for each SYU is contained in appendix BB to the PRMP/FEIS. The actual yield tables used are available for review at the district office.*

COMMENT: The approach used for incorporating genetic improvement into the growth and yield models is inappropriate.

RESPONSE: *Predicted genetic gains are based on individual tree growth differences in young progeny evaluation plantations. We recognize that it has not yet been demonstrated that these gains are achievable as per-unit-area yield gains at rotation. Field tests comparing performance of improved and unimproved stock continue to be established to verify the estimates. The Northwest tree Improvement Cooperative, of which BLM is a member, has initiated a series of genetic gain trials to evaluate genetic gain on a yield-per-unit basis. In the meantime the results from progeny evaluation plantations are the best data we have. The effect on the calculated PSQ is negligible.*

COMMENT: Adjustments to the yield models for genetics and fertilization are speculative.

RESPONSE: *Growth and yield responses to genetic selection and fertilization have been projected for a variety of management regimes using the Stand Projection System stand stimulator. The yield responses predicted by this are indeed speculative, but are conservatively based on the best available data.*

The expected gains from the genetic selection program in western Oregon are currently estimated from conifer species studies and the results of early progeny tests from the Northwest Tree Improvement Cooperative. From other forest tree studies it has been found that the major changes in growth attributes can be estimated through changes in growth height-age curves. Young stand growth studies are in place throughout western Oregon to provide data on benefits of growth of selected progeny trees. The current young growth of these trees has then been modelled through growth simulators to estimate gain in volume. Tests comparing performance of improved and unimproved stock continue to be established to verify the BLM estimates.

Part of the predictive process is indicating what to do now in order to increase the likelihood of a desired future condition. In the instances of genetic selection and fertilizer, gain is both an increase in volume and the quality/return from the resultant products. We have used average responses for acreage predicted to be treated and will monitor as well as continue research.

Genetic effects will become important in approximately 4 decades when currently treated stands will be a major part of PSQ when those areas planted with genetically improved stocked undergo thinning and limited regeneration harvest. Thus, the evidence should be available when the gains are being realized. Most simulators demonstrate low impact on current PSQ calculations and are appropriately conservative.

Fertilization and commercial thinning results are more immediate in their effects, as treatment and harvest in commercial thinning can occur within the same decade. Plots exist in western Oregon which indicate the expectation of average gains for treated stands is reasonable. Gains related to fertilization at time of precommercial thinning are more speculative. But again, as in the case of genetic selection, the effects will occur in the future.

COMMENT: Compare modeled, first-decade growth to historic, empiric growth.

RESPONSE: *In the Trim-Plus harvest scheduling model, first decade growth is based on empiric volumes derived from measurements of permanent timber inventory plots on the district. This means for example, the average volume per acre of stands currently 50 years old is assumed to increase in ten years to equal the average volume of stands currently 60 years old. Actual growth will be somewhat different from this estimate. In addition, this empiric growth rate is modified by an approach to normality function which begins to move the empiric volumes towards the predicted yields of future managed stands. The Stand Projection System was used to estimate growth of future stands.*

COMMENT: Compare the stands scheduled for treatment in decade 1 from the TRIM analysis and those stands scheduled in the operational plan for the first decade.

RESPONSE: *The 10-year scenario is not an operational plan but a modeling tool that selects the quantity of stands with similar age and previous management attributes as those modeled in the TRIM-PLUS harvest simulator.*

COMMENT: It appears that ASQ is based on a linear model similar to FORPLAN.

RESPONSE: *BLM used the Trim-Plus harvest scheduling model to estimate the sustainable harvest level for the PRMP. Trim-Plus is a timber yield model similar in many ways to FORPLAN timber yields. Major advantages were that TRIM-Plus could be run on enhanced IBM/AT compatible microcomputers and many runs could be made inexpensively and directly available for district personnel access, thus making runs adapted to local conditions and age classes. TRIM-Plus is a binary search model with the capability of structuring the forest in unlimited units based upon site, species, stocking levels and management prescription. Different minimum harvest ages can be used on component units.*

FORPLAN, in comparison, is a linear program optimization model requiring production coefficients for various resource values. It includes many more 'inputs' and addresses many 'outputs' in addition to timber yield.

COMMENT: Display a plot incorporating expected yield per acre at various rotation lengths multiplied by pond value per cubic foot. Include rotations up to 300 years.

RESPONSE: *There is not enough data to form a realistic basis for such estimates. Speculation on long-term future pond values would be more misleading than useful.*

COMMENT: Short-term harvest limitations due to emerging concerns over threatened and endangered species, watershed protection and the cumulative effects may limit ASQ more than sustained yield constraints do.

RESPONSE: *The interaction between PSQ calculation and our 10-year timber management scenario has permitted us to address cumulative watershed effects as well as is practical in a checkerboard ownership pattern where private actions are speculative. Ecosystem management is intended to minimize the need to add unforeseen restrictions on timber harvest due to listing of additional threatened and endangered species.*

COMMENT: Use a model such as FORPLAN or SARA, or expansion of your 50-11-40 rule analysis model, to determine the potential harvest acreage by subarea and type in the first few decades of the plan.

RESPONSE: *The 10-year scenario identifies potential harvest acreage, which can be determined by subarea, for the first decade. Extending the scenario into the future would lose reliability due to the adaptive nature of the plan.*

Timber - Inventories

COMMENT: Update the starting timber inventory for ASQ calculation to October 1, 1993.

RESPONSE: *For the PRMP/FEIS the inventory was updated to October 1, 1992. Only a slight increase will have occurred in the following year.*

COMMENT: Use data from the Forestry Intensified Research project, Oregon Department of Forestry and other studies to continue validate the accuracy of forest inventory data and further evaluate lands currently determined to be unsuitable. If it can be determined that these lands can be managed for timber production, return them to the suitable base. Likewise, lands in the suitable base which are determined to be unsuitable through monitoring should be taken out of the base.

RESPONSE: *Adaptive management as discussed in the Use of the Completed Plan section of Chapter 2 provides for such adjustments.*

COMMENT: Revisions in inventory procedures to monitor growth and yield are likely to be necessary.

RESPONSE: *Revisions in inventory procedures are expected and are currently underway. As part of the adaptive management philosophy, monitoring is a critical function in the forest management plan and this include growth and yield. As the objectives of management by land-use allocation become clearer, expected outcomes are projected, and multiple resource data needs are determined, the inventory systems will be delineated. Peer review is anticipated.*

COMMENT: How does the starting inventory in the TRIM Plus model compare to the Bureau's most recent inventory?

RESPONSE: *For the alternatives analyzed in the draft RMP/EIS, the average volumes by age class from the 1988 inventory were used directly as starting inventory volumes in the Trim-Plus model. If fewer than three plots in a particular age class were measured, then volumes from a nontreated normal curve for BLM's northern*

districts were substituted for actual plot volumes. For the PRMP, the 1988 inventory was updated to 1992 reflecting changes in the acre base, tree growth, and timber sold since 1988. For the Salem District, the inventory showed a net increase in cubic foot volume of 6.4 percent, while the number of BLM-administered acres increased by only one percent.

COMMENT: Volume equations and site index equations may be giving rise to biased estimates in the standing inventory.

RESPONSE: *A bias in estimation in small diameter trees is recognized. BLM volume equations had high volume levels in small diameter trees. The net effect on PSQ calculations dependent on older age classes was not considered worth correcting in the DEIS stage. Since the PRMP PSQ is less dependent on older age classes, adjustments have been made. These newer equations compare favorably with other estimates.*

Timber - Demand, Supply and Market Effects

COMMENT: Analysis of the timber supply situation is more optimistic than warranted. Portray additional scenarios reflecting lower potential harvests by other parties, as well as uncertainty of implementing proposed BLM sale levels.

RESPONSE: *The timber supply analysis has been updated (see chapter 4, Timber Resources, and appendix CC).*

Energy and Mineral Resources

COMMENT: Identify State-owned mineral rights and acknowledge non-impact of the plan on those and other existing valid rights.

RESPONSE: *BLM is aware of only a few private owners of non-federal mineral rights on BLM-administered land. The acknowledgement has been added.*

COMMENT: A mineral inventory should be conducted before withdrawals are recommended.

RESPONSE: *The withdrawal proposals in the PRMP are based on the sensitivity of other resources to significant damage from mineral exploration and/or development activities as they would be anticipated to occur under present laws and regulations. The formal recommendation to the Secretary of the Interior for withdrawal will be accompanied by a mineral potential report to support a fully informed decision.*

COMMENT: The appendix showing locatable mineral management requirements shows only standard requirements, under 43 CFR 3809. Additional restrictions in management areas such as ACECs, wild and scenic rivers, VRM class II areas and special status species habitat should also be shown.

RESPONSE: *Such restrictions will be identified on mineral management restriction maps for the PRMP that will be developed after the record of decision. Lists of the types of restricted areas are located in chapter 2, Energy and Minerals. The effects of such restrictions are site specific and mining-plan specific, and cannot be known without a specific proposal to analyze.*

COMMENT: Categorizing as low potential all areas where there is insufficient information to determine mineral potential is inappropriate.

RESPONSE: *The relevant column header in the chapter 3 tables have been revised to reflect that the identified acres are a combination of low and unknown potential.*

Land Tenure

COMMENT: Coordinate with adjoining districts regarding land tenure decisions.

RESPONSE: This coordination has been accomplished.

COMMENT: State BLM's responsibility to accommodate the State's 5,202.29 acres of in lieu land entitlement with public domain land.

RESPONSE: This has been added to chapter 3, Lands.

COMMENT: The geographic information system (GIS) used by BLM should also be used to identify areas of non-federal land that, if acquired by the federal government, will facilitate ecosystem management.

RESPONSE: BLM's GIS for western Oregon includes only limited resource data on the intermingled lands. Acquiring the data necessary to explore such a question comprehensively would cost millions of dollars and take several years.

COMMENT: If land should be considered for disposal, the Confederated Tribes should have the opportunity to acquire it, either by transfer to the BIA or other means.

RESPONSE: Current legislative authority makes no provision for such a preference for Indian tribes. Most lands considered for disposal would only be exchanged for other lands, however.

COMMENT: Acknowledge existing or potential State ownership claims on navigable waterways.

RESPONSE: This has been added to chapter 3, Lands.

Access

COMMENT: Identify how much access BLM provides to intermingled landowners through agreements and easements.

RESPONSE: Some 90 percent of intermingled forest land has rights of access for forest management purposes, under the terms of agreements and easements with BLM.

Roads

COMMENT: Develop a comprehensive road management plan.

RESPONSE: Such plans will follow completion of the RMP. Transportation management objectives will be developed for all roads.

COMMENT: Coordinate with adjacent landowners and others in the development and implementation of a comprehensive road management program.

RESPONSE: We recognize the importance of coordination with intermingled landowners and other road users. Reciprocal right-of-way agreements require coordination with the intermingled landowners and road users that are parties to them.

COMMENT: Outline how BLM will cooperate with other landowners to build the permanent road system and accomplish road management objectives.

RESPONSE: Most of the permanent road system already exists. Cooperation with other landowners is an integral part of road development planning and the development of transportation management objectives.

COMMENT: Clarify how administrative road closure and obliterating them relate to specific issues and objectives. Address maintenance of roads administratively closed. Also address road maintenance priorities if funding is not adequate.

RESPONSE: *Road closures are driven by issues and objectives for protection of other resources, such as wildlife. If roads are to be retained for future management but closed to public use, most closures would be accomplished by gates, allowing access for maintenance. Transportation management objectives in transportation management plans will address maintenance priorities.*

COMMENT: Explain how the proposed road density objective will be achieved in light of the contention that partial cut systems often require greater road densities than clear-cut systems.

RESPONSE: *Some additional roads will be temporary and will be revegetated. Some existing local and collector roads will also be closed to help meet this objective and use of aerial logging systems will increase.*

COMMENT: Develop a methodology for prioritizing those roads BLM is planning to build, as well as for prioritizing road closure and restoration.

RESPONSE: *Transportation management objectives will address such prioritization.*

Fire

COMMENT: Consider letting naturally caused fires burn, while protecting life and property.

RESPONSE: *Most naturally caused fires in the District occur during times when the fire risk (thus, danger to life and property) is high. Among the "property" at stake are timber and residences on intermingled private land. Therefore, it would rarely be appropriate to let a fire burn, except where prescribed fire and vegetation management objectives would be met.*

Socioeconomic Conditions

COMMENT: Assess the forest-wide economic efficiency of the new plans.

RESPONSE: *Assessing such efficiency would require placing dollar values on a variety of ecosystem management benefits which we do not believe can be effectively quantified on an equal economic standard with commercial product (e.g., timber) benefits. Ecosystem considerations are more appropriately assessed on their qualitative merits.*

COMMENT: Assess the economic efficiency of stand management prescriptions, including a comprehensive look at wood quality and value.

RESPONSE: *Since stand management prescriptions are driven substantially by ecosystem management concerns, we do not consider economic efficiency analysis very relevant.*

COMMENT: Update economic data to reflect more current information.

RESPONSE: *Additional and more recent employment, personal income, and county revenue information has been added to the final EIS. Although the official baseline (1984-1988) remains unchanged, the added information allows absolute and relative comparison of the alternatives and their impacts.*

COMMENT: The BLM should include an analysis of statewide impacts of the alternatives and proposed action in the final RMP/EIS.

RESPONSE: *An additional layer of analysis has been added to analyze the western Oregon impacts of BLM alternatives and the PRMP.*

COMMENT: BLM has not considered the impacts of Measure 5 in it's planning process.

RESPONSE: *A discussion of Ballot Measure 5 and the constraints it places on local government revenues has*

been added. This discussion recognizes that ballot Measure 5 is part of the economic environment in which BLM decisions are made.

COMMENT: BLM has failed to identify viable mitigation measures for the "very real and severe" social and economic impacts associated with the alternatives. Consider compensating adversely impacted citizens, maintaining/increasing county revenues, and provision of social and economic development programs that tap the spirit of rural people, to mitigate social and economic impacts.

RESPONSE: *The BLM has neither the authority nor ability to provide compensation, social services, or other economic assistance to impacted counties, businesses, or individuals. Such proposals are beyond the scope of the RMP, but they are addressed in Chapter 7 of the FEMAT report, and the Economic and Community Assistance Program discussion in Chapter 4 of the SEIS.*

COMMENT: Since 1953 the O&C counties have relinquished one third of their statutory entitlement. These foregone county monies were "invested" by the counties with the expectation they would receive a "return" on their investment through increased harvest levels in future decades. Nearly one billion of otherwise county revenue has been so appropriated since 1953.

RESPONSE: *The 25 percent plowback by the O&C counties between 1953 and 1981 was used to increase management intensity of the O&C lands. Although many expenditures, such as road building and reforestation, were made with additional future use and harvest in mind, these activities also enabled immediate access to and harvest of timber otherwise inaccessible. This resulted in increasing levels of sustainable harvest being identified throughout this period, as well as increasing timber receipt collections.*

COMMENT: School programs will be cut as revenue declines from diminished O&C receipts.

RESPONSE: *Unlike county revenues from the national forests which must be used to fund schools (25%) and roads (75%) O&C payments enter directly into the county general fund. Distribution of these general fund monies is discretionary. All counties in western Oregon have at some time transferred monies from the general fund to the local school districts or Educational Service District (ESD). Most counties continue to make these transfers annually. It is through these transfers that changing O&C payments to the counties could impact school funding. An analysis conducted in 1988 concluded that O&C funds appear to contribute between 0 and 2.75 percent of school funds. (Hackworth,Kevin. 1988. "Importance of Timber-Related Revenues to Local Governments in Oregon and the Effects of Forests in Oregon on Property Tax Rates". Masters thesis submitted to Oregon State University).*

Distribution of county general fund monies to the schools could change dramatically from past distribution patterns due to reductions in national forest payments to counties and the implementation of Ballot Measure 5.

COMMENT: BLM should "support"/"endorse" federal and state loans and grants to encourage local businesses to invest in the equipment for milling smaller logs.

RESPONSE: *Discussion of potential legislative agendas is beyond the scope of the RMP/EIS.*

COMMENT: Re-evaluate the impacts to total employment of harvest reductions.

RESPONSE: *Different models representing different employment and income multipliers were used to assess BLM and cumulative impacts. Although this appears inconsistent, we felt the different type of analysis conducted required the use of different models, thus multipliers. The analysis of BLM actions was conducted as a marginal analysis, examining only the actions of BLM. For these analyses BLMPACT was used. The western Oregon cumulative effects analysis examined BLM actions together with assumed management actions of the USFS, State and private forests. For this analysis the subregion multipliers cited in the SEIS were used. Unlike the multipliers used in the DRMP/EIS these multipliers only examine impacts within the timber industry, including self-employment.*

COMMENT: An alternative which emphasized recreation opportunities could have served as a benchmark from which to compare jobs gained from the various alternatives presented in the plans.

RESPONSE: *Using information available in Hospodarsky (1989) the BLM projected future recreation demands (year 2000) expected on BLM-administered lands. This identified demand was assumed to represent the maximum recreation potential of these lands. No alternative was developed specifically to address meeting the maximum recreation potential of BLM-administered lands. However, based on the expected provision of recreation opportunities under each alternative, we determined what level of potential demand could be met. See Table 4-19. Designing and analyzing specific plan alternatives merely to provide benchmarks for comparative analysis would make the RMP/EIS unwieldy.*

COMMENT: Provide the analytical ground work for an effective policy response to the fundamental social and economic changes which would follow the implementation of the preferred alternative.

RESPONSE: *This is outside the reach of BLM's statutory mission and beyond the scope of the RMP/EIS. Chapter 4 of the SEIS has addressed this however in its Economic and Community Assistance Program discussion.*

COMMENT: Promote restorative work for ex-loggers.

RESPONSE: *Labor intensive management activities, including restorative work, that have been incorporated into the PRMP, will provide additional employment opportunities in the local economy. The level of employment identified cannot fully replace employment losses caused by reduced harvest levels. In addition, BLM has no authority to assure that those employed in such work are ex-loggers or former workers of a specific industry.*

COMMENT: BLM has not examined the national and international impacts of reduced lumber and wood products production in the Pacific Northwest. Identified areas of impact include:

1. Economic and environmental impacts of using substitute building materials.
2. Housing cost impacts.
3. Changing import/export flows (especially from developing countries).
4. Economic and environmental impacts of harvesting timber elsewhere in the world.

RESPONSE: *A generalized discussion of the national and international impacts of using substitute building materials and fiber sources has been added using information from recent publications. These studies examine the range of resource substitution impacts individually. The extent and rate at which these effects will combine in response to reduce Pacific Northwest timber harvests is unknown.*

COMMENT: Add export base analysis.

RESPONSE: *Attempting to do an export base analysis for western Oregon communities would entail making substantial assumptions about the "export" content of incomes in many sectors of the economy of each community. The results would not contribute substantial new knowledge about which communities are sensitive to "export" markets. Sensitivity of communities to changes in "exports" has been identified through numerous sources including: (1) Oregon Legislature, Joint Legislative Committee on Land Use, Dependent Communities Desktop Analysis (1990); and Oregon Economic Development Department, Oregon's Coordinated Timber Response Program (Updated 1993).*

COMMENT: BLM failed to identify the importance of changes in the natural environment and amenity values (scenic beauty, clean water and air, recreation resources) in attracting businesses and retirees to western Oregon.

RESPONSE: *Those changes would be long term, not within the 10-year time frame of our socioeconomic analysis. Additional discussion has been added, however, to Chapter 4, Socioeconomic Conditions. Quantitative analysis and comparisons were not made for these amenity values.*

COMMENT: An economic analysis of the benefits and costs of a "Holistic Natural Watershed Management Plan" alternative, compared to the alternatives, should be made. Include greatly increased commercial and sport fishery benefits.

RESPONSE: *The SEIS addressed such an alternative in its Alternative 1. The comparative economic benefits of such an alternative would occur many decades in the future. Full recovery of fish habitat, for example, is not expected for 200 years under any alternative. The cost of heavily protective alternatives, however, in lost revenues, employment and local income, would be immediate. Economic analysis, with traditional discount rates for future benefits, would attach little current value to any such long-term benefits.*

COMMENT: Identify other forest industries which are becoming significant contributors to the local economy, such as special forest products. Identify industry potential.

RESPONSE: *The types and value of special forest products sold from BLM-administered lands have been identified. See chapter 3. The economic impacts of the these sales have not been examined due to lack of information on which to base estimates or projections of employment and personal income.*

COMMENT: Projected high stumpage prices will increase substantially more.

RESPONSE: *Less federal timber will be available in the future compared to the 1984-1988 baseline period, thus higher prices can reasonably be expected (see appendix CC).*

COMMENT: Use appropriate models to measure social impacts and systematically analyze them.

RESPONSE: *No models were used to measure or analyze social impacts in the PRMP/FEIS. However, several recent publications, not available at the time of the Draft, were used to enhance the discussion to social impacts. These publications generally relied on surveys, focus groups, and interviews to assess impacts. No models were developed or used.*

COMMENT: Add demographic and occupational profiles of communities.

RESPONSE: *This type of data is not readily available for all communities potentially impacted by BLM management alternatives. A profile of "at risk" communities was developed by the FEMAT and is discussed. This profile contains demographic, occupational, and other characteristics.*

COMMENT: Add an occupational profile of displaced workers.

RESPONSE: *This information was provided by the Oregon Employment Division. Because of the wealth of information and length of the report only a few points could be highlighted in our PRMP/FEIS. A full reference was provided for those wishing to request the information from the Oregon Employment Division.*

COMMENT: Describe the linkage and dependency (social, economic, spiritual) of local and regional communities, groups, industries, etc. on ecosystems within each land allocation.

RESPONSE: *Social and economic analyses were conducted for each alternative, representing a complete set of allocations. Individual allocations were not examined. Spiritual dependency and linkages to BLM lands are, with the exception of traditional tribal use areas, individual in nature. The RMP/EIS was unable to comprehensively address these linkages to ecosystems due to the lack of information.*

COMMENT: Disclose the economic impacts of ground-disturbing activities on the mushroom harvesting industry.

RESPONSE: *Although qualitative information regarding the ecological impacts of ground disturbing activities exists for most plant species (see revised Chapter 4, Vegetation), quantitative information for many is not available. The economic impacts of ground disturbing activities for any given mushroom species could only be*

defined on a site and time-specific basis. Therefore, it is not possible to identify any general economic impacts at this time.

Rural Interface Areas

COMMENT: BLM's strategy of buffering rural interface areas adjacent to federal lands will do little to alleviate new inappropriate developments in rural interface areas.

RESPONSE: *The PRMP strategy is intended only to address the relationship to existing and planned development. Development of private lands will be guided by local comprehensive plans in conformity with statewide planning goal 4. The BLM has no direct authority to limit or constrain development on private lands.*

COMMENT: Increase BLM's participation in Oregon's statewide land use planning program.

RESPONSE: *When the RMP is approved for implementation we expect to participate in statewide and local planning whenever proposed adjacent land uses are perceived to be inconsistent with RMP goals and objectives.*

COMMENT: The BLM should have clear policy guidance for addressing rural interface issues.

RESPONSE: *The RMP will define the objectives against which we will measure the significance of future rural interface land use issues.*

COMMENT: In cooperation with the State, establish and apply a revised definition of rural interface areas which takes into account existing uses; current federal, state, and local plans; and other land use factors.

RESPONSE: After the RMPs are complete, such a comprehensive effort can be considered. Such an effort would be dependent on the availability of local, State and BLM staffing to participate, consistent with management prioritization of workloads.

Consistency with Other Agency Plans and Programs

COMMENT: Document how the selected alternative complies with the statutory authorities and regulations of the Oregon Coastal Management Program.

RESPONSE: *This documentation is provided in appendix HH.*

COMMENT: Acknowledge that preservation of BLM wetlands contributes to attainment of the Oregon Benchmark goals on wetlands.

RESPONSE: *A statement has been added.*

COMMENT: The RMP/EIS should better outline how the alternatives compare to the following: Recovery Plan for the Northern Spotted Owl, the Forest Service EIS on Management for the Northern Spotted Owl, the Endangered Species Committee Record of Decision, Alternatives for Management of Late-Successional Forests of the Pacific Northwest, and A Conservation Strategy for the Northern Spotted Owl.

RESPONSE: *The first of these is only a final draft agency document, but a discussion has been added to the Consistency with Other Agency Plans and Programs section of Chapter 4. The second has been rendered moot by court ruling and superseded by the SEIS and its record of decision. The third merely required that BLM consult with the Fish and Wildlife Service before proceeding with certain timber sales, and such consultation is embedded in the process for completing and implementing this RMP. The last two are considered ad-hoc reports. The first of these two makes no single set of recommendations. The last makes a single set of recommendations which are specifically followed in alternative D only.*

COMMENT: The Draft RMP fails to comply with the USFWS Spotted Owl Recovery Plan.

RESPONSE: The Fish and Wildlife Service's Biological Opinion on the SEIS says that the SEIS plan, which is incorporated into the Proposed RMP, provides protection for more known spotted owl sites and currently suitable habitat than does the Final Draft Recovery Plan (FDRP), and that the number of acres subject to matrix management is less than under the FDRP. This we believe it meets the objectives of the FDRP.

Requirement for Further Environmental Analysis

COMMENT: The RMP/EIS should identify criteria for determining what sort of NEPA documentation will be required for future projects. In addition, it should provide guidance for the scope of analyses expected in these tiered documents, to clarify what analyses and issues are considered fully addressed in the RMP/EIS and what analyses and issues should be further considered based on site-specific resources and conditions.

RESPONSE: *The BLM National Environmental Policy Act Handbook provides some guidance on this topic. Supplementation of that guidance, with specific reference to the western Oregon RMPs seems premature until we gain experience relating to the ecosystem management concept and its many new management approaches.*

COMMENT: The "Further Analysis" section should clearly disclose the cumulative watershed effects analysis procedure to be used for site specific projects during RMP implementation. At present it appears undirected, fails to consider fish and fish habitat and is simplistic. To be credible, the process must be peer reviewed and deemed acceptable.

RESPONSE: *The discussion has been strengthened to address the relationship to the watershed analysis process and how that process will enhance cumulative impact analysis. The watershed analysis process is still evolving as the BLM and the Forest Service conduct pilot analyses.*

COMMENT: Describe how cumulative watershed effects analysis will be coordinated among adjacent landowners.

RESPONSE: *Information available from private landowners will be gathered and considered. Most private management plans, however, are subject to change due to changing economic conditions, so we will make some assumptions about probable private management.*

Use of the Completed Plan

COMMENT: Detail how BLM intends to integrate management, monitoring and research to continually apply adaptive management and improve the scientific basis for ecosystem management.

RESPONSE: *The discussion in chapter 2 has been expanded. Further elaboration is contained in the SEIS ROD and its Monitoring and Evaluation Plan.*

COMMENT: Clarify how timber sale volumes and associated programs will be reduced if annual funding is not sufficient to support monitoring.

RESPONSE: *The discussion in chapter 2 has been expanded.*

COMMENT: Do not plan any timber sales until there is an approved RMP and all court injunctions are lifted.

RESPONSE: *Since planning of individual timber sales usually takes a year or more, it would be irresponsible for BLM to defer all such planning until final RMP approval. Tentative site-specific plans based on unapproved versions of the RMP can be adjusted as needed to conform to the RMP as approved.*

COMMENT: Individual forest project plans should evaluate protection needs for intermittent order 1 and 2 streams, and apply protection as needed to protect channel integrity and identified beneficial uses. Project

planning should also evaluate potential cumulative effects on beneficial uses outside the project area sub-basin.

RESPONSE: *The Aquatic Conservation Strategy which is part of the record of decision for the SEIS addresses this concern and is incorporated in our PRMP. Watershed analysis will address it at the sub-basin level.*

COMMENT: Is a threshold level plus/minus 10 percent appropriate for changes in all resource outputs or impacts to resources.

RESPONSE: *Explicit thresholds have been dropped, pending completion of the SEIS monitoring plan.*

Monitoring

COMMENT: Detailed monitoring plans should be developed within one year after final plan completion. They should contain procedures which have undergone appropriate peer review. They should also identify thresholds which trigger changes in practices or procedures or result in plan changes.

RESPONSE: *Further detail in the monitoring plan awaits refinement of the Monitoring and Evaluation Plan for the SEIS.*

COMMENT: The monitoring plan should include written standards for sampling design, monitoring parameters, analytical techniques, statistical methods, reporting units, location of sampling, indicator species, budget, and procedures for using data or results in plan implementation; and availability of results to interested and affected groups. It should also have a clear feedback mechanism which enables the use of monitoring results to adjust standards and guidelines, BMPs, standard operating procedures, monitoring intensity, and project implementation.

RESPONSE: *We believe some of these details belong in technical handbooks. Others will be developed after the SEIS Monitoring and Evaluation Plan is refined or within the SEIS Monitoring and Evaluation Plan.*

COMMENT: Why aren't monitoring standards presented for each land allocation (old growth emphasis areas, connectivity ares, general forest management areas)?

RESPONSE: *This kind of stratification is included in the SEIS Monitoring and Evaluation Plan for the allocations made in the SEIS Record of Decision. The proposed RMP Monitoring Plan parallels the SEIS Monitoring and Evaluation Plan.*

COMMENT: Why haven't monitoring questions been tied to measurable standards?

RESPONSE: *For most topics, this tie awaits completion of the SEIS Monitoring and Evaluation Plan.*

COMMENT: Is there a tie between implementation and effectiveness which is necessary for meeting the expected future condition (ecosystem management)? Does BLM have a long-range monitoring framework which will direct the agency over the next 100 years in order to meet these expected future conditions?

RESPONSE: *The Monitoring and Evaluation Plan for the SEIS is expected to provide both the tie and the framework.*

COMMENT: The extent of cumulative watershed effects analysis validation should be described.

RESPONSE: *This description awaits refinement of the SEIS Monitoring and Evaluation Plan.*

COMMENT: Consider on-site inspection to monitor BMP implementation.

RESPONSE: *This will be part of contract administration.*

COMMENT: Consider RMA monitoring to assess long-term organic debris contribution to stream systems.

RESPONSE: *The SEIS Monitoring and Evaluation Plan calls for this in Key Watersheds. It is also incorporated in our monitoring plan.*

COMMENT: Consider a research/monitoring program to determine the effects of spatial/temporal segregation of timber harvests on sediment and hydrology.

RESPONSE: *Consideration of this awaits refinement of the SEIS Monitoring and Evaluation Plan.*

COMMENT: To obtain more specific data from evaluation and monitoring, subdivide analytical watersheds greater than 10,000 acres into smaller units.

RESPONSE: *Much of the aquatic systems monitoring will focus on watersheds smaller than 10,000 acres.*

COMMENT: Monitor activities in each watershed to determine cumulative effects on water, soil, fish and other resources.

RESPONSE: *The SEIS Monitoring and Evaluation Plan will be based on a determination of the level of such monitoring that would be cost effective.*

COMMENT: Mining activities in or adjacent to streams should be monitored to determine if they are adversely affecting riparian area vegetation.

RESPONSE: *Such effectiveness monitoring may be included in the SEIS Monitoring and Evaluation Plan. Activities in approved plans of operations would be monitored for conformity to RMP direction (implementation monitoring).*

COMMENT: Give more attention to monitoring the population and geographic distribution of special status plant species.

RESPONSE: *Conservation of the special status plant species will include preparation of management plans considering the geographic distribution of these species and the role of BLM populations in the survival of the species. As needed to conserve the species, these plans will direct: determination of species requirements where BLM can act to enhance survival or recovery; implementation of BLM actions in recovering or enhancing the species; and assessment of the effectiveness of those actions. Sampling of population trends will be a means of assessing what needs to be done as well as effectiveness and appropriateness of these actions in recovery of the species.*

COMMENT: Use recent advances in technology to monitor special status plants, especially listed plants.

RESPONSE: *Monitoring guidelines in the RMP must be general in nature. There is too much variation between populations and site-specific management objectives to provide more detail. More detail will be developed during activity planning following the completion of the RMP and refinement of the SEIS Monitoring and Evaluation Plan. The most cost-effective technology will be used.*

COMMENT: Monitor to assess impacts on Oregon sensitive species.

RESPONSE: *The SEIS monitoring plan will define the extent of special status species monitoring for those species which occur in special habitats. Species in the FEMAT matrix or those not in special habitats will be monitored if monitoring is prescribed as an environmental assessment for a proposed action.*

COMMENT: Monitor to ensure target levels of dead-and-downed wood are attained.

RESPONSE: *The SEIS Monitoring and Evaluation Plan addresses this.*

COMMENT: RMA monitoring should focus partly on amphibians or other key dependent species.

RESPONSE: *The extent of such validation monitoring in Riparian Reserves will be defined by the SEIS Monitoring and Evaluation Plan.*

COMMENT: Monitoring fish and fish habitat in one stream per resource area seems insufficient.

RESPONSE: *All key watersheds will be monitored.*

COMMENT: Previously logged areas should be selected for study and monitoring of experimental efforts to restore old-growth conditions.

RESPONSE: *Such studies are ongoing in existing monitoring and research programs by other agencies. Some areas have been identified where past logging on lands BLM administers appears to be leading to early development of old-growth conditions, and these are being monitored.*

COMMENT: A monitoring program should be established to identify noxious weeds before they become a problem.

RESPONSE: *As part of the Cooperative Agreement between the BLM and the Oregon Department of Agriculture (ODA), ODA conducts noxious weed field surveys; collects and redistributes biological control agents; and monitors results and efficiency of bio-control sites. Noxious weed infestations have already been identified. We continue to locate problem areas during proposed project planning when sites are surveyed.*

COMMENT: Incorporate the rural interface issue into BLM's agreement for monitoring implementation of BLM plans.

RESPONSE: *Rural interface area monitoring is included in the PRMP Monitoring Plan.*

Salem District Comments/Responses

Table of Contents

General

COMMENT: With much of the BLM land likely to remain in areas of mixed ownership, it is important that the differing objectives of private landowners be respected. Some of the suggestions for "cooperative" management fail to recognize marketing and antitrust concerns, which are very real for private landowners.

RESPONSE: *The emphasis in these suggestions is on the word "cooperative." BLM would contact private landowners and ask for their cooperation in meeting objectives such as those for ecosystem management. BLM has no authority and no intention of forcing private landowners to cooperate in any resource management program.*

COMMENT: You have overlooked one alternative plan - the no logging, no mining, no grazing plan.

RESPONSE: *This is a radical departure from statutory mandates and sustained yield management principles and clearly outside the range of reasonable alternatives. The National Environmental Policy Act does not require consideration of unreasonable alternatives. The existing range of alternatives is balanced and reasonable.*

COMMENT: None of the seven alternatives have included a selective cut format with which to make a comparison on how this would affect the competing interests on forested lands.

RESPONSE: *Alternative C proposes partial cutting on most BLM-administered land (see chapter 2-26 in the draft resource management plan).*

COMMENT: The two sides of the map showing the preferred alternative for the district and for all west side districts conflict, and nowhere in the document is it clear how that conflict would be resolved. The map of the west side shows large blocks in Connectivity Areas in the Mt. Hood corridor. The map of the district shows these same areas with a whole bunch of designations overlaid on top of each other, but it is not clear if any of them are in Connectivity Areas. How can the viewer sort out these conflicts?

RESPONSE: *See map 2-2a, District Planning Strategy and map 2-2b, District Planning Strategy (Reserves).*

COMMENT: The management of O&C lands and Public Domain lands should be delineated separately, with each land category managed to recognize the differing statutory mandates.

RESPONSE: *The land use planning process considered all BLM-administered lands as a single entity without regard to underlying land status. This was a multiple-use process which did not rule out consideration of any resource or value. This process is reflected in the ecosystem management aspects of the preferred alternative and the proposed resource management plan. Also alternative B does propose some differences in O&C and Public Domain management.*

COMMENT: The approach to soliciting public input on the draft resource management plan was very poor. No article about the Corvallis meeting was published in the Gazette Times and no announcements were posted publicly in Corvallis. Most of the people on your mailing list (apparently the only way people were notified) are members of the timber industry.

RESPONSE: *Sixteen meetings were held throughout the district to explain the draft resource management plan and to answer questions. Meeting notices were sent to local newspapers, including the Gazette Times. Apparently, some newspaper staffs chose not to publish these notices.*

Some 670 draft resource management plans and summaries with information about the meetings were mailed to people on the district resource management plan mailing list. A Planning Update listing the meetings was also sent to those on the mailing list. This list was developed over a six-year period. Anyone who expressed an interest in BLM planning was placed on the mailing list. The list is by no means dominated by timber interests.

COMMENT: The BLM has assumed in part that the resource management plan is the result of changing public values. Supposedly, the shift in values is toward less timber harvesting. This assumption should not be used as the basis for such a drastic change in management philosophy. Many public opinion polls indicate that retention of jobs is favored over endangered species protection.

RESPONSE: *The shift in public values is toward ecosystem management on public lands. Many sources, including professional resource management literature, indicate the national scope of this shift. In response, BLM has developed a plan which proposes maintenance of the essential components of western Oregon forested ecosystems, including threatened and endangered species habitat. Traditional timber harvesting (i.e., clearcutting) and other management activities will be modified under this plan to achieve ecosystem management objectives.*

COMMENT: In several instances, both wording and numbers fail to indicate the connection between the preferred alternative and other alternatives. For example, alternatives A through E "protect" special status species while the preferred alternative "manages" them. What is the difference in management if one term is used versus the other?

RESPONSE: *Alternatives A through E and the proposed resource management plan cover a wide range of options for management. These include conserve, protect, letting nature take its course, and manage (actively working to ensure the survival of the special status species).*

Soils

COMMENT: We also note similarly phrased subcategories in both the Fragile Nonsuitable and Fragile suitable-Restricted categories, e.g., slope gradient, soil moisture, mass wasting potential, etc. We are curious how you separated these similar concerns into these two different categories.

RESPONSE: *See appendix G for description and concerns for the varying categories of Fragile Timber Production Capability Classification codes.*

COMMENT: Also regarding harvesting fragile land, given that no mitigation measures exist to ensure these lands are not damaged during harvest (or they would not be classified as fragile restricted), some percentage of these lands, once harvested, will experience a loss of both biological and timber production potential. We advise taking all fragile restricted lands out of the base and allowing a case-by-case exception for very small patches which occur in General Forest areas proposed for harvest.

RESPONSE: *Fragile Restricted Timber Production Capability Classification categories are defined and mapped as those lands that are fully capable of being managed for timber management without adverse effects to site productivity when best management practices are used (see appendix G for a list of best management practices).*

COMMENT: Site-specific analysis as per the Timber Production Capability Classification was not utilized to determine suitable base in allocations for the Mt. Hood Corridor.

Regeneration of harvested stands has not been successful on some sites. Slopes, soils, and aspects of some parcels are not suitable yet are allocated either visual resource management class II or Connectivity Area and still remain in the timber base.

RESPONSE: *All BLM-administered lands with the exception of the Table Rock Wilderness area were classified through the mapping of the Timber Production Capability Classification (TPCC) on the Salem District. This includes all of the BLM lands in the Mount Hood Corridor. The TPCC identified all areas that were incapable of intensive timber management and those areas which would need more than minimal attention for successful harvesting and reforestation. Allocation as visual resource management class II or Connectivity Areas are management allocations and have no relationship with land capability identified through the TPCC.*

COMMENT: Including fragile nonsuitable woodland areas in timber harvest unit boundaries would NOT be an "unavoidable" effect on soils (p. 4-7). Rather, it would be an effect that the BLM chose not to avoid. All fragile soil areas should be avoided, even if they must be just left as untouched islands inside harvest unit boundaries.

RESPONSE: *The term "unavoidable" has been dropped.*

Water

COMMENT: A definitive designation of what a perennial stream is and how exactly these streams will be treated should be included in the resource management plan.

RESPONSE: *See the Glossary for description of a perennial stream. See best management practices in appendix G and the description of the proposed resource management plan for proposed management in riparian reserves.*

COMMENT: The resource management plan is fixated on woody debris and ignores the effect that intact riparian and upland areas have on stabilizing stream flow and reducing siltation.

Woody debris from the called for 94-foot width riparian management area will have minimal benefits to fish if the riverbed is silted-in and endures extreme flow fluctuations.

RESPONSE: *Riparian reserves are designated under the proposed resource management plan on all streams and wetlands. This, combined with the large number of leave trees proposed to be maintained in the upland*

areas would provide protection to maintain water quality. See the description of the proposed resource management plan in chapter 2 and best management practices in appendix G for more details.

COMMENT: It is disturbing to note that water quality conditions are predicted to decline in eighteen of Salem's analytical watersheds during the next decade. Why is this so? This contention inappropriately ignores the water quality protection mechanisms in the Oregon Forest Practices Act as well as the BLM's own best management practices.

RESPONSE: *The overall watershed condition includes and is driven by activities and assumptions of management on private lands. This to a high degree, has resulted in reduced projected watershed conditions.*

COMMENT: The hyporheic zone, absolutely vital to riverine ecological functioning is not mentioned or planned for in the resource management plan.

RESPONSE: *The hyporheic zone is addressed in chapters 3 and 4 of the proposed resource management plan/ final environmental impact statement.*

Biological Diversity

COMMENT: The Mr. Hood Corridor is currently very fragmented. The oldest stands are located on BLM parcels. There is no empirical evidence which proves that the BLM plan for the Mt. Hood Corridor can improve or accelerate old-growth habitat.

RESPONSE: *BLM-administered lands in the Mt. Hood Corridor will be managed as visual resource management class I which prohibits scheduled timber harvest or as connectivity/diversity blocks managed on a 150-year rotation. Twenty-five to thirty percent of the latter areas would be maintained in late-successional condition.*

COMMENT: The resource management plan also has determined it will only measure biodiversity in relation to mature forests and forests that meet old-growth conditions. These vegetative types, or successional stages are not the only lands capable of providing diverse habitat. Existing data clearly shows that younger-age classes are capable of supplying a variety of habitat conditions. By only selecting the old-age classes to measure diversity, the resource management plan has biased its own management. Without discussing the younger-age classes found on BLM ownership the Salem District is selling its management short of measured diversity.

RESPONSE: *BLM recognizes that younger-seral stages provide a variety of habitat conditions. However, these stages currently dominate BLM-administered lands in the Salem District and adjacent private lands. Old growth is rare in the Salem District (less than ten percent of the land base) and on adjacent private lands.*

COMMENT: We see two possible negative long-term effects of BLM's biodiversity proposal. First, is that BLM's proposal will increase diversity above that which existed in natural systems. Second, the proposal is setting the Bureau up for major unplanned and uncontrollable natural catastrophic events. Monitoring is essential as you move through time with your proposal, as it will identify these and other possible negative effects.

RESPONSE: *The current age structure in the Salem District is out of balance with younger-age classes dominating the current age structure. BLM's proposal aims to increase the amount of older-forest stages to correct this current imbalance.*

The point that the BLM proposal is setting up major unplanned and uncontrollable natural catastrophic events is unsubstantiated. Although it is true that slash removal by controlled burns will not be as major an activity as in the past, it is difficult to predict future fire-return intervals. Modern fire control methods and an extensive road network will aid in the prevention of wildfires.

BLM agrees that monitoring is essential. The draft monitoring plan has been revised in the proposed resource management plan.

COMMENT: Ratings provided by the resource management plan for each alternative have no real bearing to biodiversity. Surely, BLM understands the high degree of variance in younger stands, and should consequently display this rating. Without this approach, the Salem District ignores positive elements of diversity found in non-mature and old-growth forests.

RESPONSE: *BLM recognized the importance of early seral stages to biological diversity by rating the expected changes in the amount of this habitat under the various alternatives. Although younger seral stages provide a variety of habitat conditions, these stages are currently the dominant age classes in the Salem District.*

COMMENT: Chapter 3 does not give sufficiently detailed information about the impact of the plan upon diversities, with the exception of the pacific yew, the spotted owl and the marbled murrelet. It is simply not clear whether these diversities will still exist if the proposed plan is implemented; in fact, it appears that they will not.

RESPONSE: *Chapter 4 assesses the impacts of alternatives on components of biological diversity and other resources. BLM has expanded this section in the proposed resource management plan compared to the draft. Implementation of the proposed resource management plan, which tiers to management direction established in the record of decision for the SEIS, is expected to enhance biological diversity on BLM-administered lands over time. Protection of threatened and endangered species such as the spotted owl and marbled murrelet is required under the Endangered Species Act.*

COMMENT: The Salem District must clearly understand its role in providing biodiversity at all measurable levels. Clearly, 329,000 acres of forest land is a substantial acreage. However, the physical layout of this acreage and intermingled ownership may prevent the BLM from developing landscape level objectives beyond 640 acres in many cases.

RESPONSE: *BLM agrees that landscape level objectives, in some cases, will have to be applied to small blocks (e.g., less than or equal to 640 acres) because of ownership patterns. However, some larger blocks are also available to meet these objectives.*

COMMENT: The resource management plan seems to insinuate that mature and old-growth forests are the only source of "biodiversity" on the landscape.

The greatest diversity of plant and animal species, and the greatest population densities of plant and animal species occurs in the younger-seral stage forests under 120 years of age.

RESPONSE: *Several components of biological diversity were considered in the proposed resource management plan in addition to mature and old-growth forest.*

Plant and animal species diversity is comparable in younger and older stages. However, much of the plant diversity in younger seral stages is due to prolific, weedy invader species with simple life cycles and short life spans. These pioneer species can successfully exploit disturbed ecosystems. Species associated with older forests have more complicated life cycles, are not very successful in exploiting disturbed ecosystems, and thus are more restricted to their natural habitat.

Animal species that prefer early successional habitats are generalists. They have evolved characteristics which enable them to survive in these environments. These characteristics include: rapid population growth, wide dispersal capacity, and relative flexibility in habitat requirements. Old-growth related species, adapted to a more stable habitat, tend to be specialists that often have slow population growth rates and poor dispersal capabilities.

COMMENT: We support the inclusion of Rock Creek in the Prairie Mt. OGEA-1, but question the exclusion of the west half of the Tobe Creek drainage.

RESPONSE: *The proposed resource management plan incorporates the management direction in the record of decision for the SEIS. As a result, Late-Successional Reserves have been added to the proposed resource management plan while old growth emphasis areas have been dropped. In the proposed resource management plan, Rock Creek and the Tobe Creek drainage (including the west half) are included in the Late-Successional Reserve system.*

COMMENT: The old growth emphasis areas will be deferred for 80 years which is a good start, but they are subject to density management during that time. I feel that at least 1/2 of these areas should be in no cut, no management classification permanently. The part open to logging should be done on a minimum of a 300-year replacement cycle using gentle, uneven-age management methods.

I also suggest that the connectivity areas be managed the same as I recommended for the old growth emphasis areas.

RESPONSE: *The proposed resource management plan incorporates the management direction in the record of decision for the SEIS. As a result, Late-Successional Reserves have replaced old growth emphasis areas in the proposed resource management plan. Standards and guidelines for Late-Successional Reserves allow no harvest in stands over 80 years old (110 years in northern coast range adaptive management areas). Thinning may occur in stands up to 80 years old but they must be beneficial to the creation and maintenance of late-successional forest conditions.*

The connectivity areas will be managed differently from the Late-Successional Reserves based on varying management objectives. Management emphasis for Connectivity/Diversity Blocks will be to maintain ecotypic richness and diversity in the forest matrix as well as to contribute to the movement, dispersal, and connectivity of plant and animal species.

Vegetation

COMMENT: I have a concern about the proposed use of herbicides on "competing vegetation." What plants are considered "competing vegetation?" Are, for example, blueberries and rhododendrons considered "competing vegetation?"

RESPONSE: *Competing vegetation is considered any plant species which competes with other species for essential growth requirements (e.g., nutrients, space, etc.). In some cases, blueberries and rhododendrons may be considered competing vegetation, but the usual major competitors include such species as salal, salmon-berry, vine maple, and big-leaf maple.*

COMMENT: Fungi concentrate chemicals in their metabolic processes, and areas where collection of mush-rooms occurs should not be sprayed at all with the long-lasting herbicides listed in the plan. Does the district know where these are?

RESPONSE: *Most commercial fungi (e.g. , chantarelles) are collected in forested stands where herbicides would not normally be applied.*

COMMENT: Nowhere does the BLM plan address the threat to wet meadows from forest accretion brought about by European management systems.

RESPONSE: *BLM has not collected any data on wetland loss due to forest accretion, but is unaware of any law that mandates protection of wetlands from successional processes whether caused by European management systems or not.*

COMMENT: We note that only about 36 acres of oak woodland occur on the Salem District. These acres should be preserved and protected.

RESPONSE: *Oak woodland would not be normally harvested since Douglas-fir is the primary commercial species in the Salem District.*

COMMENT: Commercially valuable mushrooms are principally associated with mature and ancient forest habitats. What consideration was given to protecting the habitat of so valuable a crop?

RESPONSE: *Under the proposed resource management plan, a network of reserves has been established to maintain and develop late successional and old-growth forests and associated species such as mushrooms. It is*

important to note, however, that some of the economically important species, such as the chantarelle, grow well in younger forests.

Riparian Zones

COMMENT: Much more information on biological and in-stream variables for riparian zones is needed. Timber management data alone is not enough to assess riparian habitat condition.

RESPONSE: *The BLM has conducted extensive habitat inventories throughout western Oregon. Analysis of the information obtained indicates a general relationship between the age and composition of the riparian community and the instream woody structure that creates fish habitat. The relationship is far from absolute, as BLM is aware, but the vegetation is a good general indicator of the overall health of a system. In the absence of detailed data on all streams, BLM elected to use vegetation information as the best method for approximating stream health. However, this information was not the only information used to establish condition ratings. An equally important component of the methodology was the related factor analysis. This analysis adjusted the condition arrived at using the vegetation information to account for such related factors as the amount of new and existing roads, soil stability, and adjacent land management practices to name a few.*

COMMENT: It is uncertain whether a no-harvest prescription in the riparian management areas will necessarily improve riparian conditions in all situations. A "no touch" approach will not consistently maintain or generate quality riparian areas.

If a riparian area is brush dominated, one cannot expect successful natural conifer regeneration. Thus, these streams will likely remain shade deficient. Nor in a hardwood-dominated riparian area can one expect natural conifer succession. Thus, these streams will likely become deficient in large woody debris.

RESPONSE: *The proposed resource management plan incorporates the Aquatic Conservation Strategy presented in the record of decision for the SEIS. One of the standards and guidelines for Riparian Reserves under this strategy states, "Apply silvicultural practices for Riparian Reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation Strategy objectives." Thus the proposed resource management plan does not propose a "no touch" condition. Activities which would enhance the development of conifers within riparian management areas would be encouraged.*

COMMENT: I hate to see buffer strips on creeks blow down and change the channel resulting in more silt reaching the creek than if they were logged. Cut some footage every year or so in each creek.

RESPONSE: *The proposed resource management plan incorporates the Aquatic Conservation Strategy presented in the record of decision for the SEIS. One of the standards and guidelines for Riparian Reserves under this strategy states, "Remove salvage trees only when watershed analysis determines that present and future woody debris needs are met and other Aquatic Conservation Strategy objectives are not adversely affected."*

COMMENT: The riparian buffer strips which you propose are commendable in preserving water quality and fish habitat, but what about other wildlife?

RESPONSE: *Riparian Reserves established in the proposed resource management plan are expected to benefit riparian habitat conditions for wildlife in addition to water quality, fish habitat, and the ecological and functional processes of riparian zones.*

COMMENT: Retaining 50 to 240-foot no harvest buffers on each side of forest streams is excessive. Of what value is 200-300 percent of full protection, especially in areas where timber production is a management goal?

RESPONSE: *In the proposed resource management plan, Riparian Reserves reflect widths established in the Aquatic Conservation Strategy of the record of decision for the SEIS. Widths for non-fish bearing streams are less than for fish-bearing streams, and they may be further modified after watershed analysis. Wider buffers are important in watersheds with degraded fish habitat, deteriorating watershed conditions and where wildlife goals*

dictate wider buffers. They also reduce the potential effects of blowdown. Wider buffers also enhance biological diversity in watersheds that have received intensive forest management in the past.

COMMENT: While sound reason exists for keeping streams cool, solar radiation also stimulates the primary aquatic production cycle. Fish are dependent upon this cycle. Most likely there will be a balancing point where the benefits of providing shade will have a diminishing return to fish and stimulating primary production will have an increasingly positive effect. This important relationship is ignored in the BLM's documentation and must be recognized during the Agency's consideration of how streamside vegetation shall be managed.

RESPONSE: *Solar radiation stimulates primary aquatic production but this must be balanced with the harmful effects associated with high stream temperatures. BLM lands are checkerboarded and intervening private lands often have less functional stream buffers than found on federal lands. Thus, the importance of maintaining adequate buffers on BLM-administered lands is magnified.*

Wildlife

COMMENT: Appendix 3-I (wildlife data) needs corrections. Distinctions between different forest successional stages are not defined, and it appears to be quite random as to which stages are assigned as primary habitat for many species. If Early Seral means natural stands with abundant snags and logs, the assignments would be quite different from those if this stage meant recent clearcut with few or no snags and logs.

RESPONSE: *Appendix 3-I has been corrected and is available in the Salem District office files.*

COMMENT: If the green tree leave system is used extensively, what effect will show up in subsequent stands with regard to species composition? Said another way, will subsequent stands tend more and more to shade tolerant species?

If more shade tolerant species begin to dominate the stands, have you taken into account their generally less useful and less valuable characteristics in your economic calculations? If yes, how?

RESPONSE: *BLM agrees that the green tree leave system will likely produce subsequent stands with more shade tolerant species such as western hemlock and western redcedar. However, active management would substantially aid the regeneration of Douglas-fir saplings assuming funding levels are adequate.*

While the economic value of western hemlock and western redcedar is currently less than Douglas-fir, it is difficult to predict the value of timber by species in future years.

COMMENT: We note that some residual trees will be left after regeneration. This makes the system sound like a coppice with standards system. Yet, thinning, fertilization and use of genetically improved planting stock are referred to. Where is the experimental evidence available that shows that such a system will work?

RESPONSE: *Shelterwood harvesting has been conducted to a minor degree in the Salem District so some data is available. Oregon State University and the National Biological Survey are conducting tests to evaluate harvest and silvicultural methods and their impacts on forest regeneration.*

COMMENT: The proposed six to eight standing trees per logged acre is practically useless under the proposed preferred alternative. It is doubtful that many of the trees would still be standing in 80 years to provide a multi-layered canopy.

RESPONSE: *BLM agrees that blowdown is an ever present threat to trees standing in logged areas. BLM will attempt to locate these trees in the best possible position to avoid the effects of windstorms. The use of groups of trees and the positioning of trees in draws and lower parts of harvest areas are expected to reduce this threat.*

COMMENT: The General Forest Management Area tree retention requirements will create more complex structural values on BLM lands, but at levels which are not consistent with reasonably expected use by wildlife species. A Forest Service publication states that snag densities less than one tree per acre would meet 100

percent of maximum populations for many bird populations including the BLM's selected indicator species.

RESPONSE: *BLM is not aware of the Forest Service publication of which you refer. Observations of clearcut harvest units in the Salem District during the past decade indicate that very little bird use is present in clear cuts with less than one snag per acre. Many of the snags retained in the past are soft snags which will not be available in the long term.*

COMMENT: The Oregon State Forest Practices Act regulations now call for leaving two snags or two green trees per acre during harvesting. The BLM plans call for six to eight green trees per acre to be left in most cases and 12 to 16 green trees per acre to be left in others. This is far more trees than are necessary to meet the needs of cavity dwelling birds and will likely provide more potential future nesting trees for spotted owls than they could ever use.

RESPONSE: *Green trees will be left for a variety of purposes including: 1) retention of legacy trees in subsequent rotations, 2) future standing dead tree recruitment, and 3) future downed woody material recruitment. Thus goals are not just for cavity dwelling birds or as future nesting trees for spotted owl.*

COMMENT: The BLM states that alternatives with higher timber harvest levels also negatively impact elk populations because of a higher road density network. It is not the existence of roads that influence elk, but the timing and amount of vehicular traffic BLM allows on the roads. It is our view that the higher forage levels produced under alternatives A and B, aided by forage enhancement programs (seeding and fertilization) and an effective road closure program will produce healthy elk populations when compared to the preferred alternative.

RESPONSE: *BLM believes that a higher road density network does negatively impact elk in western Oregon. The state of Oregon in their overall response to draft BLM plans agreed with this assessment. Due to the checkerboarded nature of BLM lands, control of access on BLM-administered roads has been a fairly limited program. Closures affecting multiple land owners have been found to be difficult to implement (refer to Coos Bay District-BLM for their experience in attempting to draft a road closure plan for the district.) The few historic closures in the Salem District have usually been in association with the Oregon Department of Fish and Wildlife to control hunting pressure. As such, they were enforced for only a brief period each year. This is not to say that road closure plans can not be effective given changing circumstances and political support. In fact, BLM is proposing to develop a comprehensive road management plan for its lands.*

COMMENT: Seeding nonnative species to provide elk forage is destructive to native species of plants, and an outdated way to provide marginal forage. Far better would be to seed with native plants, using local genotypes.

RESPONSE: *BLM would like to seed with native species of plants but there are few or no reliable seed sources at this time.*

COMMENT: I disagree with your figures on your ability to increase elk "habitat" by decreasing your timber harvesting and doing supplemental forage seeding. Elk populations have been on the increase in the Coast Range in recent history, and the increase in population is directly correlated with forest management activities, i.e., timber harvesting.

RESPONSE: *BLM believes that implementation of the proposed resource management plan may result in an increase in elk populations. Old-growth forests are rare on the Salem District (less than 10 percent of land base). Old-growth forests have the advantage of providing cover and forage in close proximity enabling elk to better survive under inclement weather conditions and to forage without undue harassment and poaching. Forage in old growth is produced in canopy openings created by tree mortality. Private lands managed under short harvest rotations will likely produce adequate forage for elk in the Coast Range in the near and long term.*

COMMENT: If the private lands in the vicinity truly have "marginal" cover and forage conditions, as described in the plan, why are elk populations growing and flourishing on our lands? It seems ironic that Oregon Department of Fish and Wildlife-recommended hunting areas coincide so well with Weyerhaeuser and other intensively managed forests.

RESPONSE: *It is true that elk are apparently doing well on private lands. However, old growth is a limited resource throughout western Oregon. This is the over-riding concern. Elk will use old growth as they did historically. Conversion of younger-seral stages to older forests on federal lands is not expected to be deleterious for elk considering forage production on adjacent private lands and historic use of old growth by elk.*

COMMENT: The BLM has not discussed how its management actions will impact the decline of neotropical bird migrants.

RESPONSE: *This section has been included in the proposed resource management plan. It should be noted, however, that data on these species is very limited and firm conclusions can probably not be made at this time.*

Fish

COMMENT: The resource management plan reflects a lack of objectivity. Nowhere, for example, was it found that the BLM discussed and addressed the species-specific requirements for rearing and spawning habitat.

RESPONSE: *BLM did not discuss species-specific requirements for rearing and spawning habitat in the draft resource management plan/environmental impact statement or in the proposed resource management plan. This information was presented in the Analysis of Management Situation which is a planning document that summarized basic management information used in development of the draft draft resource management plan/environmental impact statement and subsequent proposed resource management plan.*

COMMENT: Map #9 in the draft resource management plan doesn't appear to show anadromous fish in the South Fork of the Alsea, Lobster Creek, or any of their tributaries. This is an error as the District knows that there are anadromous fish populations in these basins.

RESPONSE: *BLM acknowledges the fish distribution error. This map was dropped in the proposed resource management plan due to problems with the Geographic Information System fish data base.*

COMMENT: The BLM relies on arguments purportedly based on scientific knowledge. However, this is not necessarily true.

For instance, the Salem District Draft Plan states: Based on research findings and district stream monitoring, alternatives no action and A would likely fall short of potential large woody debris by around 50 percent in the long term.

There is no indication of what research is being referenced here. Nor is there any presentation and discussion of the monitoring to which the statement refers.

RESPONSE: *The lack of research documentation in the draft resource management plan is acknowledged. This is corrected in the proposed resource management plan by tiering to the extensive research summary in the SEIS.*

COMMENT: The Salem District's evaluation of fish, fish habitat, and production is totally based on incomplete or outright false assumptions.

The method to rate streams for instance, and subsequent attempt to assess fish population lack any credible discussion of science or appropriate reference to science. There are many factors beyond the control of BLM resource management plans that have much greater impacts to fish populations than singling out a ridiculous rating of riparian conditions or stream conditions.

Factors such as other human development, urbanization, urban industrialization as well as direct impacts such as fishing levels or ocean conditions have been shown to significantly affect population levels of fisheries.

RESPONSE: *The method to rate stream habitat and fish populations is outlined in Appendix 4-G of the draft resource management plan. Assumptions used in developing these ratings are provided, plus sources of the data*

used in the analysis. BLM recognizes there are many factors, most beyond BLM's ability to influence, which affect the population of anadromous fish. However, riparian habitat condition is one factor that BLM can control.

COMMENT: The estimates of long-term increases of coho and steelhead (86 and 81 percent, respectively) are entirely unsubstantiated and overly optimistic. Considering the resource management plan is not recognizing the degraded and non-recovering condition of riparian areas on adjacent lands, and that the riparian management areas are too small to adequately protect and restore sensitive fish populations, there is no valid basis for these estimates.

RESPONSE: *The proposed resource management plan tiers to the Aquatic Conservation Strategy presented in the record of decision for the SEIS. This strategy is described in appendix B6 of the SEIS. The proposed resource management plan is expected to benefit aquatic and riparian habitats more than other alternatives because it applies Riparian Reserve Scenario 1 to intermittent streams and provides the largest amount of lands in Late-Successional Reserves.*

COMMENT: Though the resource management plan recognizes the existence of 33 critical stocks on the district, it does not identify critical habitat for these declining salmonid stocks.

RESPONSE: *The proposed resource management plan incorporates the Aquatic Conservation Strategy presented in the record of decision of the SEIS which is expected to benefit these species. The National Marine Fisheries Service is reviewing the status of certain fish stocks which may result in the identification of critical habitat in the future. The drainages used by Salem District critical stocks are listed in the proposed resource management plan.*

COMMENT: The information presented in the fish populations and habitat section is very incomplete. Data and mention of sea-run cutthroat is substantially lacking. Accurate data on critical stocks is lacking. The resource management plan must be amended to reflect the best known science, principally the standards identified by the Scientific Panel on Late-Successional Forest Ecosystems.

RESPONSE: *Some of the requested information on fish populations and habitat is presented in the Analysis of Management Situation which is available in the Salem District office. In addition, the proposed resource management plan tiers to the Aquatic Conservation Strategy presented in the record of decision for the SEIS. The Strategy incorporates the latest findings on habitat and fish populations including critical stocks. The strategy is based on a numerous scientific studies including the report mentioned in the comment.*

COMMENT: The data on population trends presented in table 3-19 of the draft resource management plan is suspect due to the flawed methodology of Oregon Department of Fish and Wildlife escapement estimates.

RESPONSE: *The wild population trend is based on professional judgment after consideration of existing data and knowledge on the condition of these populations. It is not dependent on any one specific estimate.*

COMMENT: It is a faulty assumption that streams are fully seeded both in the short-term and the long-term. Oregon Department of Fish and Wildlife's own data for coastal coho shows escapement levels have been below the biological target for years. This means that current habitats already under utilized (i.e., not fully seeded) and proposals aimed at providing even more habitat will not solve the problem.

RESPONSE: *The assumption of fully seeded streams was used as a basis to enable BLM to rank the potential fish production levels on a relative basis under the various alternatives. BLM's responsibility is to manage riparian habitat to benefit fish populations. Oregon Department of Fish and Wildlife's data on population levels does not change this responsibility.*

COMMENT: It is a faulty assumption that "fish species distribution is accurate based on current Oregon Department of Fish and Wildlife and BLM surveys." As recently as December 13, 1992, when an article appeared in The Oregonian, the Oregon Department of Fish and Wildlife admits its survey methodology was seriously flawed. The Oregon Department of Fish and Wildlife now believes that the numbers of adult coastal coho returning to spawn

have been overestimated. Regardless of habitat quality, adult spawners are not returning from the ocean at the biological levels necessary to sustain the populations.

RESPONSE: Fish distribution refers to the occurrence or nonoccurrence of fish species in specific stream reaches. It does not refer to the abundance of fish in those stream reaches. Oregon Department of Fish and Wildlife's methodology pertained to the calculation of fish escapement levels.

COMMENT: Road construction is a major threat to fish habitat on public land, even with today's higher construction standards. Given the at risk status of fish stocks within the planning area, increased road construction poses various risks to different stocks, which need to be discussed explicitly by the BLM. The draft resource management plan allows harvest on 10,670 acres of fragile restricted lands during the first decade, including many which are too steep, have a high mass movement potential or a high surface erosion potential. The draft plan recommends best management practices to reduce damage done to these lands during harvest, yet the effectiveness of these mitigation measures is not proven. Harvesting of high risk lands in light of the condition of fish habitat in the district's streams and the degraded fish habitat found throughout the region poses an unacceptable risk to fish.

RESPONSE: The proposed resource management plan incorporates the Aquatic Conservation Strategy presented in the record of decision for the SEIS (see appendix B6 of the SEIS). Standards and guidelines for road management in Riparian Reserves (see p. B-123 and B-124) include among other things completing watershed analyses prior to construction of new roads and determining the influence of each road on the Aquatic Conservation Strategy objectives through watershed analysis.

Special Status Species

COMMENT: We are specifically concerned about the bald eagle roosting area in the Scappoose block which has apparently received no special protection in the Salem draft resource management plan.

RESPONSE: This issue has been clarified in the proposed resource management plan. All BLM actions will be consistent with the Pacific Bald Eagle Recovery Plan *and implementation plan. The Raymond Creek site will be protected by a Late-Successional Reserve.*

COMMENT: I find on page 2-28 the following: "BLM and BLM-permitted activities would be constrained or modified to the extent considered necessary. This would prevent federal listing of federal candidate (category 1 and 2) species known to occur only on BLM-administered lands." As I read it, no species occurring ONLY on BLM-administered lands would be subject to federal listing. This proposed exemption is simply unacceptable. It is really only on public lands that the Endangered Species Act can be enforced!

RESPONSE: BLM policy for special status species (BLM Manual 6840) varies according to the status of these species as determined by the U.S. Fish and Wildlife Service and according to BLM's own sensitive and assessment species lists.

COMMENT: The resource management plan should plan research into the habitat needs of the Haddock caddisfly.

RESPONSE: BLM cooperates in research on special status species through challenge grants with other agencies (e.g., The Nature Conservancy, Oregon Department of Fish and Wildlife). Although Haddock's caddisfly has not been prioritized for study by any of the above cooperators, research has been supported on other invertebrate species.

COMMENT: Several sensitive plant species are listed in the plan, but no specific information is given for management of these species, some of which occur in areas of critical envrionmental concern.

There are three plant species in Tillamook and Lincoln counties that are listed in the resource management plan/ environmental impact statement that are of concern to our chapter: *Erythronium elegans, Dodecatheon austrofrigidum,* and *Fritillaria camschatcensis.*

The *Erythronium* and *Dodecatheon* are endemic to the north coast of Oregon. The *Fritillaria* is rarer on the north coast, but a more wide-ranging species. All three deserve the greatest protection due to limited populations and distribution.

RESPONSE: *Specific information on the management of sensitive plant species is provided in the proposed resource management plan. The Salem District manages only one population of* Dodecatheon austrofrigidum *which is being monitored. The district also manages several populations of* Erythronium elegans, *including a population within an area of critical environmental concern. Other populations of* Erythronium elegans *are in plant reserves.* Fritillaria camschatcensis *is known from one boggy area in the Coast Range which is included in an area of critical environmental concern.*

COMMENT: We believe that the resource management plan should reflect, at least in chapter 2, more accurately what the district is doing with its botany program.

RESPONSE: *Additional information on the Salem District's botany program is provided in chapter 3 of the proposed resource management plan.*

COMMENT: We request the BLM to model or estimate the number of suitable murrelet nest trees expected to exist under each alternative through time. Such an analysis is crucial information and should be divulged in the proposed resource management plan.

RESPONSE: *BLM is not aware of any models which would estimate the number of suitable murrelet nest trees required over time. The proposed resource management plan tiers to the conservation strategy for the marbled murrelet presented in the record of decision for the SEIS.*

COMMENT: The conclusion that habitat of the marbled murrelet is expected to decline in the short term under the preferred alternative due to the already limited amount of suitable habitat available within 50 miles of the coast is very misleading. Is this due to continued logging expected in suitable habitat?

RESPONSE: *The proposed resource management plan tiers to the murrelet conservation strategy described in the record of decision for the SEIS. Most of the suitable habitat within 35 miles of the coast would be protected under that strategy.*

Spotted Owl

COMMENT: In the old growth emphasis area-2 (Nestucca block), there is a concern that the management scenario being proposed is untested and possibly too aggressive. Thus, it may not meet the intent of the spotted owl recovery plan.

RESPONSE: *The area referred to is now included in the Northern Coast Adaptive Management Area under the proposed resource management plan as tiered to the record of decision for the SEIS. Much of this area is a Late-Successional Reserve. Management emphasis is on restoration and maintenance of late-successional forest habitat, consistent with standards and guidelines for the spotted owl.*

COMMENT: There is great owl production in the Elliot State Forest, which has been very intensely managed for more than 30 years. Why did the BLM not employ this data regarding suitable owl habitat?

RESPONSE: *All relevant information was considered in adoption of the spotted owl conservation strategy in the proposed resource management plan which tiers to the record of decision for the SEIS.*

COMMENT: The final plan should not just try to limit the decline of the spotted owl but help its recovery. Presently the only method to recover the spotted owl population is to increase the amount of old growth and mature forest. The number of old growth and combined old growth and mature forest blocks of all sizes should be increased not decreased.

RESPONSE: The proposed resource management plan incorporates the conservation strategy for the northern spotted owl in the record of decision for the SEIS which includes establishment of Late-Successional and Riparian Reserves and protection of occupied spotted owl sites. This strategy is the federal contribution to the recovery of the northern spotted owl.

COMMENT: The BLM should also question the primary definitions of suitable habitat based on where owls have been found on its land.

RESPONSE: Suitable habitat was defined by the U.S. Fish and Wildlife Service based on their understanding of habitat requirements of the spotted owl. Based on the best scientific information to date, old growth is the primary habitat for spotted owl nesting. Suitable habitat, as defined in scientific studies, was considered in development of the conservation strategy for the northern spotted owl in the record of decision for the SEIS.

COMMENT: There are no long-term demographic studies of spotted owls in natural old growth and younger-age forests. And yet old growth has been claimed as superior to younger forests for spotted owls.

RESPONSE: The SEIS includes the latest findings on spotted owl demographic studies throughout the range of the northern spotted owl.

COMMENT: There is a more proactive and efficient approach (i.e., alternative B) to spotted owl habitat management which has the potential of providing for both timber harvest and home range habitat on the majority of the land. Alternative B would provide for spotted owls on between 75-99 percent of the land (based on the premise that a spotted owl pair's home range needs only to be comprised of 30-40 percent nesting, roosting, and foraging habitat).

RESPONSE: In the Report of the Scientific Analysis Team (1993), the preferred alternative of the draft resource management plan was compared to alternative D of the preferred alternative, which is equivalent to the strategy recommended by the Interagency Scientific Committee. The SAT Report concluded that the preferred alternative introduced significant additional risk to the viability of spotted owls compared to alternative D. Alternative B would provide less suitable habitat for spotted owls in the short and long term than either alternative D or the preferred alternative. The proposed resource management plan incorporates the conservation strategy for the northern spotted owl in the record of decision for the SEIS.

COMMENT: One assumption which will have a dramatic effect on any model of this sort is the time needed to create "suitable" spotted owl habitat after treatment. It is our belief that stands will become functional foraging, roosting and nesting habitat in much less time than assumed in the draft plans given the silvicultural prescriptions used.

RESPONSE: The proposed resource management plan tiers to the analysis of effects of the northern spotted owl in the SEIS. The spotted owl habitat model in the draft resource management plan has been dropped.

COMMENT: The BLM documentation states that the high number of pairs is due to "packing." The packing theory has never been scientifically tested nor proven. There is no discussion in the document to support the validity of the packing theory. Studies in northern California are showing the highest reproductive rates are found in those areas with the highest density of owls. It is theorized that the habitat in this area is superior and is therefore attracting owls who are reproducing. Here is a situation where high numbers do not support the packing theory but run counter to it.

RESPONSE: The proposed resource management plan tiers to the spotted owl conservation strategy in the record of decision for the SEIS. The discussion on packing has been dropped from the proposed resource management plan. However, observations in the Salem District do not seem to show the "packing" effects purportedly occurring in the Elliot Forest. That is, habitat limitations in the Coast Range are so restrictive that packing may not occur. Spotted owl populations are very low in the Coast Range.

COMMENT: The U.S. Fish and Wildlife Service Recovery Plan, under Management Rules for designated Conservation Areas, states as follows: "No timber harvest is allowed in habitat suitable for northern spotted owls." Comparing your preferred alternative map with the FWS Recovery map, shows that you have designated most of the habitat conservation areas as Old Growth Ecosystem Area "Deferred" or "Non-Deferred". Both of these categories envision timber harvest sooner or later. How do you reconcile this with the Recovery Plan?

RESPONSE: *The proposed resource management plan tiers to the spotted owl conservation strategy presented in the record of decision for the SEIS. This strategy provides for Late-Successional Reserves, Riparian Reserves, and protection of occupied spotted owl sites as of Jan. 1, 1994. As such, old growth emphasis areas were dropped between the draft and the final. The strategy presented in the record of decision is expected to provide the federal lands' contribution to spotted owl recovery. Salem District-administered lands comprise part of this contribution.*

COMMENT: It appears that the BLM did not model owl populations over time for the actual landscapes that would exist under the different alternatives but rather picked a hypothetical representative landscape for each. Both of these conventions tend to underestimate the true capacity of the land to support spotted owls. The underestimation occurs because the size of any vegetative management activity will average less than 20 acres, the landscape is not homogeneous but is interspersed with riparian leave strips and unsuitable lands and the overestimation of the time needed for stands to become suitable habitat.

RESPONSE: *The proposed resource management plan tiers to the analysis of impacts presented in the record of decision for the SEIS. The analysis in the SEIS was based on acres of suitable habitat under the various alternatives in the short and long term. In addition, updated demographic data were considered in the analysis. The analysis of effects presented in the draft resource management plan has been dropped.*

COMMENT: To develop the mathematical formula used in the owl habitat model in the draft resource management plan, the developers of the model must make numerous assumptions about how the species in question will react. The draft resource management plan does not reference the scientific research which validates the crucial mathematical coefficients used in the model.

RESPONSE: *The habitat model in the draft resource management plan was dropped between the draft and the final. The proposed resource management plan tiers to the analysis presented in the record of decision for the SEIS. The latter analysis was based on acres of suitable habitat in reserves under the various alternatives both in the short and long term.*

COMMENT: The biological needs for dispersal of juvenile spotted owls are easily met without going to the extremes of connectivity block management. Rotations of 150 years and retention of 12 to 16 green trees per acre are simply not necessary. On most high site lands managed by the BLM dispersal objectives for owls can be met within 30 years after timber harvest if a few green conifers, hardwoods and all down woody material is left on site.

RESPONSE: *The proposed resource management plan tiers to the conservation strategy for spotted owls presented in the record of decision for the SEIS. Under the proposed resource management plan, Riparian Reserves, connectivity blocks, administrative withdrawals, etc. are expected to contribute to dispersal habitat needed by juvenile spotted owls. Connectivity/diversity blocks were located to enhance biological diversity opportunities and to provide some dispersal habitat.*

COMMENT: Stating that only a percentage of the BLM's lands will be capable of supporting spotted owls is misleading and underestimates the true potential. It is commonly known that a spotted owl pairs home range needs only to be comprised of between 30-40 percent nesting, roosting, and foraging habitat. The preferred alternative would contain 149,000 acres of suitable habitat after 10 years. This is enough suitable habitat to provide between 335,250 and 447,000 home range acres, which could support 110 to 150 pairs.

RESPONSE: BLM's Salem District has about 53,000 acres of habitat suitable for nesting by spotted owls. Of this total, about 31,000 acres are considered as old growth. Spotted owl pairs in the Salem District are most abundant in the Cascade Range where most of the existing old growth occurs (specifically the Santiam Resource Area). Very few spotted owl pairs have been located in the Coast Range which has been listed as an Area of Concern by the U.S. Fish and Wildlife Service. BLM's data provides support for the view that spotted owls are surviving best in areas with the greatest amounts of old-growth stands remaining. Given this background, a more conservative view for owl protection may be appropriate.

Lands

COMMENT: How will the BLM handle requests for rights-of-way for private and other public landowners to access their property? If the BLM denies access for one reason or another, will the landowners be compensated for their loss?

RESPONSE: BLM is required by law to grant reasonable access to adjacent properties. This requirement has been added to the proposed resource management plan.

COMMENT: Exchanges to enhance old growth enhancement areas and connectivity areas should not occur until the proposed management strategies are tested and determined biologically sound and if the public accepts the premise advanced in the preferred alternative. The plan should be changed to reflect this policy.

RESPONSE: The proposed management strategies will take many years to test to determine biological soundness. Delaying exchanges until that time would be unreasonable. Blocking up lands as opportunities arise will benefit BLM management regardless of the eventual management strategy.

COMMENT: From a conservation of timber supply standpoint, we understand the restriction that O&C lands available for timber production would not be candidates for exchange. In reality however, this constraint would stop many exchanges.

RESPONSE: The preferred alternative (see page 2-38 of the draft resource management plan) and the proposed resource management plan do not prohibit exchanges involving O&C timber land. Management direction is to consider exchange of O&C lands available for timber management for lands to be managed for multiple use purposes.

Special Areas

COMMENT: The draft resource management plan states that some of Grass Mountain has "been disturbed by off-road vehicle (ORV) use". The area has been closed to ORV use. In order to effectively close the area to vehicle use the BLM needs to physically close roads. We propose blocking both of the access roads to the top of the mountain via ditching or the placement of large boulders or wood in the roads.

RESPONSE: Although the area has been disturbed by off-highway vehicles in the past, very little disturbance has occurred in the last ten years. Permanent road closures as suggested would restrict BLM resource management activities and severely limit emergency access in case of fire. If off-highway vehicle disturbance is discovered through future monitoring, the need for road closures will be reevaluated.

COMMENT: In appendix 4-J, Forest Peak was listed as only a potential area of critical environmental concern when actually it is recommended as an area of critical environmental concern/research natural area by the preferred alternative.

RESPONSE: This omission has been corrected.

COMMENT: The Nature Conservancy inventoried and recommended a site near Snow Peak in the Santiam Resource Area for area of critical environmental concern nomination. We would like to encourage the District to move forward with the area of critical environmental concern criteria screening for the site.

RESPONSE: *We were unable to screen this nomination due to the timing of the submission and other work priorities. The nomination will be screened as soon as the proposed resource management plan record of decision is signed. Site values will be protected until that time.*

COMMENT: The preferred alternative removes Alsea Bay Island from proposed area of critical environmental concern (ACEC) listing. ACEC status for this wetland is needed to support the plan's stated goal of biodiversity. Lincoln County planning designations will not protect the area. There are reports of a rare *Orthocarpus* on the island. A botanical survey is badly needed before its values as an ACEC can be properly appraised.

RESPONSE: *The Alsea Bay island was evaluated for importance and relevance, as are all area of critical environmental concern candidates. We felt the importance criterion was met, but the relevance criterion was not met because the risk level to the natural values there is very low. The island will be managed as a Riparian Reserve under the proposed resource management plan.*

The area has had several botanical surveys in the past. In fact, Steiiaria humifusa *(spreading starwort) which is an Oregon Natural Heritage Program (ONHP) List 37 watch plant (BLM tracking species) has been identified on the island. This island does provide "habitat" for a proposed ONHP List 4 watch plant /BLM tracking)* Orthocarpus castillejoides *now called* Castilleja ambigua, *but this species has never been identified on the island. The island will receive additional botanical clearances/surveys in accordance with the management framework plan botany monitoring.*

COMMENT: In spite of continued designation of Sheridan Peak as an area of critical environmental concern in the preferred alternative, timber harvest is planned. The preferred alternative is unacceptable, because by definition an area of critical environmental concern cannot be managed for multiple use. Timber harvest will have an adverse affect on *Poa marcida.*

RESPONSE: *Multiple use is allowed in areas of critical environmental concern as long as primary values can be protected. Evidence suggests that* Poa marcida *will survive limited timber management. The limited timber management that might occur in the area of critical environmental concern would be for habitat improvement, including opening up the overstory and thinning the understory. A closed canopy is adversely affecting* Poa *habitat. This disturbance is likely to promote* Poa marcida *and not have an adverse effect. If monitoring detects adverse impacts on* Poa *from harvest activity, additional mitigation measures will be considered during future site-specific planning.*

COMMENT: Plant species of special interest in Grassy Overlook potential area of critical environmental concern have not remained intact (page 3L-2), and reduction of the protected area will further degrade biodiversity in this watershed.

RESPONSE: *The plants of interest in the Grassy Overlook timber sale were addressed in an environmental assessment. Special precautions and contract stipulations were developed to minimize negative impacts on the population. Post project monitoring verified that the measures were adequate. Future management of this area will be on an ecosystem management basis, which will consider all plants and which should assure future biological diversity in the area.*

COMMENT: My understanding is that Table Mountain was to be or has been designated as a national natural landmark. I can find no discussion of this special federal status nor a specific plan for its management anywhere in this volume. It deserves protection under the plan's goal of biological diversity.

RESPONSE: *Table Mountain is addressed in appendix 3-M (page 3-M-3) and appendix 2-E (page appendix 2-18) of the draft resource management plan. Although the area does not qualify as an area of critical environmental concern, it would be managed as a Late-Successional Reserve under the proposed resource management plan. The national natural landmark designation was made by the National Park Service. The designation will continue, but management will be dictated by the Late-Successional Reserve allocation.*

COMMENT: Big Canyon Area of Critical Environmental Concern should be retained as an ACEC. It has high educational potential, and access through private property has not been a problem in the past.

RESPONSE: *The educational value of the canyon is recognized by BLM. Late-Successional and Riparian Reserve land allocations will protect the educational values. While access has been obtained by some visitors, all adjacent landowners have firmly rejected government efforts to purchase public access. In addition, some landowners have expressed concern to BLM about the frequency of public requests to cross their property.*

COMMENT: The preferred alternative deletes Yellowstone Creek from area of critical environmental concern candidacy. Management has overridden the recommendation of its interdisciplinary team. That the preferred alternative would have no impact is misinformation. This beautiful area should be protected from logging and developed as a recreational resource for the public and conserved for its biological diversity.

RESPONSE: *Although the area has been removed from designation as an area of critical environmental concern, it will be managed as a Late-Successional Reserve and Riparian Reserve.*

COMMENT: The preferred alternative should include a goal of writing management plans for all designated research natural areas within the next five years. The plan should designate buffer zones around the boundaries of areas of critical environmental concern and research natural areas to ensure that resource management actions do not threaten the continued maintenance of the features for which the areas of critical environmental concern were designated.

RESPONSE: *All of the currently designated research natural areas are included in an area of critical environmental concern management plan. Plans for the two new research natural areas will be developed as soon as possible after the record of decision is signed.*

Most of the areas recommended for area of critical environmental concern designation have built in buffers. Some do not because they are isolated tracts of BLM-administered land. The impacts of adjacent land uses and management activities are evaluated during monitoring. If boundaries are found insufficient to protect primary values, adjustments on BLM-administered land may be made by area managers.

COMMENT: Chapter 2, p. 2-53, states that off-road vehicle use will be limited in High Peak/Moon Creek Research Natural Area. Off-road vehicle use is not compatible with research natural area management and should be prohibited within all research natural areas, on and off roads.

RESPONSE: *The proposed resource management plan/final environmental impact statement has been corrected to show High Peak/Moon Creek Research Natural Area as closed to off-highway vehicles.*

COMMENT: If you have no planned harvest in your designated special management areas, how do you propose to establish conifer trees in areas where they are needed?

RESPONSE: *Most of the areas of critical environmental concern in the Salem District have special natural values. The purpose of designating these areas is to allow natural processes to continue with minimal disruption. Growing trees for harvest is not compatible with this purpose.*

COMMENT: The document is unclear regarding mineral withdrawal for the two proposed research natural areas and the existing research natural areas. Withdrawal is important for research natural areas in order to protect the sites from existing and potential mineral development.

RESPONSE: *As shown under the no action alternative (i.e., current management) table 2-3, all of the research natural areas except Little Sink are open to locatable mineral entry, and all of the research natural areas are open to mineral leasing. The table shows that proposed management under the proposed resource management plan is to close all research natural areas to locatable mineral entry and to allow mineral leasing with no surface occupancy.*

COMMENT: We strongly recommend closing all roads in and through research natural areas, either by putting the road to bed (restoration) or by gating roads that are needed for long-term access. The Shafer Creek proposed research natural area also has several small, old and relatively overgrown skid roads that could benefit by having more substantial barriers to access.

RESPONSE: *Road management will be addressed on a watershed basis considering such allocations as Late-Successional Reserves, Riparian Reserves, research natural areas and areas of critical environmental concern.*

Physical closure of roads in the Shafer Creek Area of Critical Environmental Concern/Research Natural Area will be considered during the area of critical environmental concern management plan process.

COMMENT: We feel that limited use of the Sheridan Peak Area of Critical Environmental Concern is compatible with its protected status. This use would be compatible if motorcycles were limited to the existing motorcycle road and jeep trail. As no *Poa marcida* lives on the road or trail, the plant would not be harmed by motorcycles.

RESPONSE: *The management proposal in the proposed resource management plan is to allow limited off-highway vehicle use. How much use and where will be determined when the current area of critical environmental concern management plan is revised.*

Cultural Resources

COMMENT: Mining activities seem to have been glossed over in the plan. Excavations, removal and associated structures have economic value as well as possibly adverse environmental impact. The plan needs to address these uses in more detail.

RESPONSE: *Past, current, and future mining activities are described in chapters 2, 3, and 4 and appendix DD. Mining activities on BLM-administered land in the district are very limited and not expected to occur to any great extent in the future. As stated in the introduction to chapter 4, "The timing, duration and degree of [mineral] development is speculative and cannot be estimated at reasonably accurate levels given current information." Therefore, no estimates were made of possible economic contributions.*

The only other possible economic value of mining is related to sightseeing at mining locations. There are no mining sites with sightseeing value on BLM-administered land in the district (see chapter 3, Cultural Resources).

Visual Resources

COMMENT: Separating the parcels in the Mt. Hood Corridor conflicts with the very definition of visual resource management classes VRM I and VRM II. All parcels within the viewshed should be allocated VRM I. BLM holdings are fragmented in this corridor yet each remaining parcel has a significant effect on the scenic quality of the entire area.

RESPONSE: *Under the proposed resource management plan, all BLM-administered lands within the boundary of the proposed Mt. Hood Corridor Special Recreation Management Area will be managed as VRM Class I.*

Recreation

COMMENT: It is my understanding that much of Hunchback, as well as all other "viewable" BLM land will be designated as "SRMA" under your draft plan. Management of our watersheds is becoming more and more critical. Why not make the entire BLM boundary in that area a SRMA?

RESPONSE: *Special recreation management area designation is a BLM-specific status given to an area where recreation is a primary management objective. Such recognition applies only to the acreage logically tied to the identified recreation values rather than applying across the general landscape/watershed. If other values present are at issue in the broader landscape area, such as those related to watersheds, land-use allocations other than special recreation management area would more logically apply. To carry the entire BLM-administered area as an special recreation management area would simply be an inappropriate designation from a management standpoint.*

COMMENT: Significant response for the proposed 2,600 acre Mt. Hood Corridor Special Recreation Management Area was received by the BLM, with support directed specifically toward "no planned timber harvest" and "remove special recreation management area from the base (allowable sale quantity)".

RESPONSE: *Unlike wilderness designation, special recreation management area designation does not, by definition, preclude activities related to forest management. So long as these activities, such as road construction and timber harvest, are not inconsistent with management objectives related to recreation and visual resource management, they would be allowed to occur within special recreation management area boundaries. Also refer to the Mt. Hood Corridor response under Rural Interface Areas.*

COMMENT: We strongly oppose ORV use not only for the Marys Peak Area of Critical Environmental Concern/ Outstanding Natural Area but for the proposed 2,317-acre special recreation management area.

RESPONSE: *Off-highway vehicle use is a recognized, legitimate activity on the public lands. Within the confines of the law, and where there is adequate evidence that such activity is not inconsistent with other resource management objectives, off-highway vehicle use will be allowed. President Richard Nixon's 1972 Executive Order 11644 and President Jimmy Carter's 1977 Executive Order 11989 both support this position. There are only three reasons where off-highway vehicle use on BLM-administered lands would be closed or limited including: 1) to protect resources; 2) to promote visitor safety; and 3) to minimize conflicts among the various land uses. Where one or more of these reasons justify regulation of off-highway vehicle use within either the Marys Peak Area of Critical Environmental Concern/Outstanding Natural Area or the proposed special recreation management area, a closed or limited off-highway vehicle designation will be implemented.*

COMMENT: The proposed Marys Peak Special Recreation Management Area's planning should consider its Native American history.

RESPONSE: *We agree that this should be an important aspect of management planning for the special recreation management area.*

COMMENT: The BLM's draft resource management plan has deviated significantly from the Analysis of the Management Situation proposal to designate a 2,600-acre Mt. Hood Corridor Special Recreation Management Area, with no planned timber harvest, and has failed to provide quantitative data to support proposed land allocations.

RESPONSE: *BLM's Analysis of the Management Situation addressed possible management opportunities, not proposals. While it is true that the draft resource management plan deviated significantly from this document, BLM simply is not in a position to adopt, as proposals, every possible opportunity associated with management of the public lands.*

COMMENT: Provide more emphasis for recreation opportunities in the Mt. Hood Valley Corridor. This draft plan does not address potentials.

RESPONSE: *We disagree that the draft resource management plan does not address recreation management potentials in the Mt. Hood Corridor area. The BLM-managed Wildwood Recreation Site, historic Barlow Road, Boulder Ridge Trailhead and Trail, McIntyre Ridge Trailhead and Trail, congressionally designated Salmon Wild and Scenic River, Mt. Hood Corridor Special Recreation Management Area, scenic values along State Highway 26, and the Sandy River segments eligible for inclusion as components of the National Wild and Scenic Rivers System are all specifically addressed.*

COMMENT: Develop a site-specific resource management plan for the Mt. Hood Corridor Special Recreation Management Area.

RESPONSE: *The Mt. Hood Corridor is, by definition, too small an area to justify the process necessary to develop a resource management plan separate from the districtwide plan. Preparation of a site-specific, post-record of decision recreation area management plan for the special recreation management area would be more in line with the BLM land use-planning policy.*

COMMENT: Table S-2 gives capability to meet 10-year demand in recreation. What about 20-year and 50-year demand? The population of this area is mushrooming.

RESPONSE: *The models used to derive the recreation demand data base were not capable of projecting 50-year demand. While a recreation demand projection was available for the year 2010, the year 2000 projections were selected because they more closely match the resource management plan's planning horizon.*

COMMENT: Action for expanding recreational and educational opportunities must be taken now. Nearly all areas of the Salem District will continue to experience increasing populations which will also create a demand for more recreational facilities and opportunities.

RESPONSE: *We agree, however implementation of proposed resource management plan recreation-related decisions, particularly those involving facility construction projects, will be dependent on future funding.*

COMMENT: In response to the growing demand for recreational opportunities by both Willamette Valley residents and tourists, the text of the draft plan should clearly state how new or improved recreational facilities (e.g., campsites, trails, interpretive kiosks) and the proposed multiple use area on Marys Peak will enhance public recreation opportunities.

RESPONSE: *The Effects on Recreation section in chapter 4 describes this information.*

COMMENT: The text included under chapter 4 -- Environmental Consequences (pp. 55-58) suggests that BLM contemplates reductions in recreational facilities in the Alsea Resource Area. BLM and Forest Service camping facilities are already at or near full capacity for much of the year. In order to be consistent with the Salem District's draft plan's goal of reducing detrimental impacts to communities arising from reductions in annual timber harvest levels, enhancement of recreational opportunities and new facility construction should be made a high priority in the Alsea Resource Area.

RESPONSE: *Chapter 4 describes environmental consequences associated with a range of alternatives - each of which considers varying management direction and resource allocations. While it is true that the consequence of managing under some alternatives would lead to recreation facility/opportunity reductions, it is equally true that projected recreation demands, including those dependent on developed facilities, would be fully met through management under other alternatives. We agree that enhancement of recreation opportunities and development of new recreation facilities will be a factor in the economic stability efforts of some communities.*

COMMENT: The preferred alternative places too much emphasis on off-road vehicles. Instead of trying to increase ORV opportunities, BLM should conduct a districtwide inventory of sensitive wildlife areas and areas with currently high road densities or ORV use. BLM should then remove or close roads in these areas and prohibit ORV use. In the meantime the Salem District should adopt the State of Oregon's recommendations on road management and adopt closures to immediately benefit big game. Development of interpretive trails for hiking, horseback riding and wildlife viewing should be given priority over off-road vehicle area development in the district.

RESPONSE: *See previous response related to off-highway vehicle use within the Marys Peak Area of Critical Environmental Concern/Outstanding Natural Area and Special Recreation Management Area. It applies equally to all other BLM-administered lands.*

COMMENT: The draft resource management plan contains no environmental analysis concerning the decision to allow ORV use across 287,700 acres on the District. The use of ORVs over 287,700 acres could potentially have significant environmental effects, which are never analyzed in the draft resource management plan. Any ORV use which is currently occurring should cease until the environmental impacts of this activity are analyzed.

RESPONSE: *See previous response related to off-highway vehicle use within the Marys Peak Area of Critical Environmental Concern/Outstanding Natural Area and Special Recreation Management Area. It applies equally*

to all other BLM-administered lands. We disagree that the environmental effects of off-highway vehicle use have not been analyzed. As already discussed, there are only three reasons where off-highway vehicle use on BLM-administered lands would be closed or limited including: 1) to protect resources; 2) to promote visitor safety; and 3) to minimize conflicts among the various land uses. With these three guidelines considered, our analysis shows that tens of thousands of acres under each of the management alternatives would be closed or limited to off-highway vehicle use. In the absence of one or more of these reasons, our analysis concludes that the lands should remain open to visitors using off-highway vehicles pending evidence that more restrictive regulation should instead be implemented.

COMMENT: We are also concerned about maintenance of parks and trails. It doesn't seem logical then to create more.

RESPONSE: *The need for the BLM to develop additional recreation sites and trails is based on recreation activity demand projections for the region. Budgetary constraints notwithstanding, the Salem District is committed to meeting its role and responsibilities as a federal provider of developed facilities. Speculation about future operation and maintenance funding should not constrain potential development projects at the land-use allocation phase of planning process.*

COMMENT: We are adamantly opposed to a trail system which would negatively impact forest management on public or private land but we are especially concerned about the proposed trail from Parker Creek to the North Fork fish hatchery. We are concerned about fire and other hazards, but we are most concerned about the loss of control of our own property by the establishment of any permanent uncontrolled public right-of-way.

RESPONSE: *The potential trail within the North Fork Alsea River drainage is just that, a development potential. The BLM recognizes that any linear trail route traversing public and private lands can only be accomplished through cooperation/agreement with the private sector - and with public support. The resolution of specific issues, such as fire hazards, would need to be cooperatively addressed in the agreement negotiations. Concerning this particular potential trail, forest management activities would not be affected on either public or private land since the purpose of the trail would be to provide visitor access through a managed forest setting. Regarding the loss of control of private lands, the federal government would not have any right of control over lands and resources on privately owned property, and neither would the general public.*

COMMENT: We want our 12 miles of motorcycle trails listed in the first paragraph of the "Recreation" section.

RESPONSE: *This is not the appropriate location for this reference. It has been added to the table listing existing trails as the Tillamook Off-Highway Vehicle Trail.*

COMMENT: Our existing motorcycle trails are not listed in Table S-1.

RESPONSE: *Table S-1 has been edited to reflect this trail and its total mileage.*

Wild and Scenic Rivers

COMMENT: Do you recommend W&SR designations based on the criteria in the W&SR Act? If not, why not?

RESPONSE: *The criteria set forth in the Wild and Scenic Rivers Act are binding on all federal agencies involved in planning for the use and development of water and related land resources, and the BLM follows these criteria explicitly.*

COMMENT: Criteria for wild and scenic designation and protection requires that the eligible system be clearly superior. The plan does not document how the various criteria were applied to the rivers identified by the BLM. ...to de-facto listing. Since many of these rivers do not include a majority of the BLM-administered lands, we question this management approach.

RESPONSE: *We agree that river segments determined to be eligible for inclusion as components of the National Wild and Scenic Rivers System need to be clearly superior. The Wild and Scenic Rivers Act mandates that a river segment must meet only two criteria to be determined eligible; it must be a free-flowing segment, and have at least one value determined to be outstandingly remarkable. All river segments determined eligible by the BLM met these two criteria. We disagree that the plan does not document how the various criteria were applied to identified river segments. District files document, on a river-segment by river-segment basis, the eligibility and classification determination process. Appendix J of the proposed resource management plan/final environmental impact statement summarizes the criteria used, and appendix I summarizes the results of the process as applied. Protection of the free-flowing character and outstandingly remarkable values of segments determined to be eligible is BLM policy, and constitutes "de-facto listing" only to the extent required by law. Finally, regarding the comment about many rivers not including a majority of BLM-administered lands, we point out again that land ownership is not one of the criteria used to determine segment eligibility and classification. The land ownership question is considered during the suitability portion of the overall river study process, and was a screen used to decide which eligible river segments would be assessed for suitability in the resource management plan.*

COMMENT: Why does the government want to take it away from the property owners who have had by rights for over a hundred of years?

RESPONSE: *Congressional designation of a river segment as a component of the National Wild and Scenic Rivers System does not automatically confer to the federal government any right of control over lands or resources on privately owned property. Regarding any right on private lands, the BLM does not want or desire to "take it away from the property owners" as suggested by the comment.*

COMMENT: Analysis of potential W&SR is severely flawed by finding that "outstandingly remarkable values" shift or disappear according to management alternative chosen.

RESPONSE: *The outstandingly remarkable values do not "shift or disappear" through the selected range of reasonable management alternatives analyzed. What changed across the range of alternatives was the finding of suitability for the eligible river segments studied, not the outstandingly remarkable values.*

COMMENT: It appears the process used to determine W&SR Act suitability and recommendations was arbitrary and did not comply with the spirit or the letter of the W&SR Act.

RESPONSE: *The process used was neither arbitrary nor blind to the mandates set forth in the Wild and Scenic Rivers Act. The Act mandates are binding on all federal agencies involved in planning for the use and development of water and related land resources, and the BLM follows them explicitly.*

COMMENT: This plan fails to protect the "outstandingly remarkable values" which caused the W&SR to be designated and which must be protected by terms of the W&SR Act.

RESPONSE: *Outstandingly remarkable values within the administrative boundaries of designated wild and scenic river segments will be protected by the land use allocations and wild and scenic river program management actions/direction under the proposed resource management plan. Of particular significance will be the revision of existing river management plans to address attainment of Aquatic Conservation Strategy objectives.*

Timber

COMMENT: What is the approximate reduction in yield predicted by the Stand Projection System (SPS) due to green tree retention? ...is this reduction based on experimental evidence or is it a best estimate?

RESPONSE: *Green tree retention reduces stand yields in two ways: (1) the yield at regeneration harvest excludes the volume contained in the retained trees, and (2) the growth of the new stand is reduced by the competition of the overstory trees. This reduction in growth varies in SPS according to the number of green trees retained per acre. For the six to eight tree per acre retention in the General Forest Management Area under the*

proposed resource management plan, understory tree growth was reduced about 8 to 10 percent by overstory competition. These reductions appear reasonable, but such a management regime is outside the range of empiric data used to build the SPS model, so the results are somewhat speculative.

COMMENT: The sustained units as defined in the plan should be all of the district and not portions of the district.

RESPONSE: *The management team decided not to pursue this option because of the likelihood of creating excessive cumulative impacts in specific watersheds.*

COMMENT: The proposals do not clearly identify sustainability of harvest over extended periods--until 2020, 2050, and until 2090. The issue is not just volume of wood, but also quality of wood. Thus the proposal for early harvest of a major proportion of the remaining old growth will severely restrict resources available in succeeding decades.

RESPONSE: *The Trim-Plus model is used by BLM to determine the maximum sustainable harvest level over a 400-year period within the constraints of the selected management regime. While the size or quality of harvested timber would vary over time, the longer rotations planned for the Connectivity/Diversity Blocks under the proposed resource management plan would result in harvest of larger, higher quality wood in the future compared to forests managed on shorter rotations. Harvests from the Adaptive Management Area under the proposed resource management plan are also expected to include a significant portion of large, high quality logs. Under the proposed resource management plan, less than 1.5 percent of the existing old-growth forest on the Salem District is projected for harvest during the first decade of the plan.*

COMMENT: Remove from the allowable sale quantity all parcels located within the valley to reduce undue pressure on management objectives and to protect resources present.

RESPONSE: *For the most part, BLM parcels scattered within the Willamette Valley have already been excluded from the probable sale quantity base because of a variety constraints relating to other resource values.*

COMMENT: For the General Forest Management Area of the preferred alternative and its equivalent in the other alternatives, widespread use of uneven-aged cutting with single-tree and small group selection (under three acres) on a 200 to 300 year replacement cycle can result in a truly sustainable forest. The leaving of snags and considerable large wood debris needs to be part of an uneven-age scheme. An alternative should be developed, or at least one of the existing alternatives modified to make long cycle, uneven-aged management the silviculture method for the General Forest Management Area of the preferred alternative or its equivalent in the other alternatives. This alternative should be the final preferred alternative.

RESPONSE: *Under the proposed resource management plan, longer rotations and uneven-aged or multistory management regimes would be used in the Connectivity/Diversity Blocks and probably in the Adaptive Management Area as well. Management within the General Forest Management Area, however, is intended to reflect an emphasis on intensive timber production. Nevertheless, all harvest planning for General Forest Management Area projects will include provisions for maintaining or improving the amount of snag and large woody debris habitat, as well as retention of some large green trees on harvested areas.*

COMMENT: The BLM should assist in the development and use of technologies appropriate for thinning, such as smaller tractors and yarding systems, rubber tired skidders, horse logging, and helicopters.

RESPONSE: *Under the proposed resource management plan, BLM expects to make increased use of logging systems appropriate for thinning.*

COMMENT: The small patch cuts proposed for old growth enhancement areas would adversely impact the long-term productivity of the land. They also would not provide sufficient light for regeneration of Douglas-fir, and would result in a shift to shade-tolerant species. In addition, logging costs would increase, animal damage would be greater, and future stands may be more susceptible to health problems.

RESPONSE: *Recent studies indicate partial cuttings and patch cuts would be feasible in most western Oregon forests. The impacts to long-term productivity would depend on the nature of the logging operation. An increase in the percentage of shade-tolerant species in stands would be expected, and logging costs would certainly be greater. However, a more diverse stand should be more resistant to insects and disease than single-storied stands composed of only one or two species.*

COMMENT: Acreage in commercial thinning seems excessive - are the harvest levels of the preferred alternative lower (in thousand cubic feet and thousand board feet) because smaller trees will be harvested?

RESPONSE: *The acreage of commercial thinning is higher under the proposed resource management plan than under the previous plan for several reasons: (1) The longer rotations planned for the Connectivity/Diversity Blocks and probably the Adaptive Management Area would allow more time for implementation of multiple thinnings on an individual stand; (2) most thinnings in the Connectivity/Diversity Blocks and Adaptive Management Area, and all thinnings in Late-Successional Reserves, would be designed to promote development of late-successional forest conditions, often in stands which would not have been considered suitable for thinning for timber production purposes; and (3) recent increases in timber stumpage values have greatly expanded the range of stands which would be economically feasible to thin.*

Under the proposed resource management plan, harvest levels are substantially lower than they would be under any other alternative. This is a result of the greatly reduced acreage available for timber production. The size of trees harvested would be equal to or greater than those harvested under the other alternatives.

COMMENT: We are concerned that the BLM may overly constrain harvesting operations on lands classified for special visual management. We could not find disclosure in the draft environmental impact statement detailing the expected impact on timber production from the various visual resource allocations.

RESPONSE: *Only the visual resource management class II (VRM II) results in additional constraints on timber management. On approximately 1,000 acres of BLM-administered lands classified as VRM II within the General Forest Management Area, timber would be managed on a longer rotation similar to that of the Connectivity/ Diversity Blocks. Because of the small number of acres affected, no reduction in the probable sale quantity was projected due to VRM II restrictions.*

COMMENT: Live tree retention has some serious costs and consequences associated with it. These include reduced yields, reforestation problems, wind firmness, and future stand health. With live tree retention on the order of six to eight trees per acre, yields could be reduced anywhere from 5 to 10 percent. With higher retention rates, e.g., 12 to 15 trees per acre, yields could decline as much as 20 percent.

RESPONSE: *Green tree retention will indeed reduce yields and increase costs of logging. The yield reductions stated in the comment are in agreement with BLM estimates. The benefits of green tree retention relate to provision of snags for wildlife and to development of older-forest structure over time.*

COMMENT: The BLM plan to defer regeneration harvesting for 80 years on the majority of the old growth emphasis area acres has essentially the same impact on communities and county revenues during the next ten years as a decision to permanently remove the acres from management. During the next eight to nine decades of deferred management there will be huge losses in old growth enhancement areas to insects, diseases, fire, and windstorms if an aggressive salvage program is not instituted.

RESPONSE: *Under the proposed resource management plan, there are no harvest deferrals, except that existing patches of older forest would be deferred from harvest in watersheds where little older forest remains. The forest lands within the Late-Successional Reserves, however, would not be available for any scheduled timber harvest. Some younger stands would be considered for density management thinnings, where the treatment would be beneficial to the development of late-successional forest conditions. If large numbers of trees within the Late-Successional Reserves are damaged or killed by insects, disease, fire, or wind, appropriate salvage harvest would be considered.*

COMMENT: The BLM should make a clearer statement that it has not overcut its forestlands. The current inventory tables show a significant increase in volume from the previous inventory completed in 1978. The higher than expected growth rates are attributable to the intensive forest management practices employed on much of the BLM lands and to use of conservative modeling estimates. Arguments are made that these lands are being cut at levels which cannot be sustained. The fact is, as evidenced by the latest inventories, these lands were actually capable of producing even higher levels on a sustainable basis.

RESPONSE: *The inventory does show that BLM's harvest level over the past decade is sustainable, given the land use allocations and management practices that were used. Reduced probable sale quantity levels in the proposed resource management plan are a result of different land allocations and changed management regimes.*

COMMENT: Present Net Value (PNV) should not be used as a timber management tool for our public forests. It puts too much emphasis on short rotation tree farming at the expense of maintaining a true forest.

RESPONSE: *BLM economists have used PNV as a tool to compare the efficiency of various intensive practices. However, the final selection of management regimes is based on a balanced consideration of many factors.*

COMMENT: It has been reported in the press that substantial portions of BLM acreages harvested have not been replanted. Is such a situation actual in the Salem District? It would be useful to have a specific factual summary of the actual number of acres within the area allocated for timber production which have not been replanted after harvest, those replanted and considered fully stocked, those replanted with problems in achieving stocking, those harvested before replanting was required with some breakdown of stocking status, and those never harvested. It is important both for industry and for various elements of the public that rely on this important resource to have a factual base.

RESPONSE: *There has been considerable misinformation and misunderstanding of this question in the media. In fact, it has been BLM policy for at least the last three decades to promptly reforest all harvested areas. This is done in most cases by planting nursery-grown seedlings, but aerial seeding was common in the past. Where the first planting attempts are not successful, areas are re-treated until desired stocking levels are achieved. Of the forest land harvested in the last 20 years on Salem District, only about one percent currently has less than the minimum acceptable stocking.*

COMMENT: Precommercial thinning and commercial thinning can supplement timber supply and result in high quality wood. Pruning should be utilized 10-20 years after partial cut thinning and 10-20 years before commercial thinning to enhance wood quality. Utilization of material thinned, whether as chips or saw logs, would add to the overall productivity of the site.

RESPONSE: *BLM anticipates that all of these practices would be used, where appropriate, under the proposed resource management plan.*

COMMENT: For the old growth emphasis area, and for comparable productivity class land, what is the reduction in present net value of that management regime as compared to the General Forest Management Area, again for comparable productivity class land?

RESPONSE: *Economic analyses were done to estimate the present net value (PNV) effect of each of several intensive forest management practices taken singly. PNV analysis was not undertaken on complete management regimes, such as those proposed for the General Forest Management Area under the draft resource management plan preferred alternative. Under the proposed resource management plan, the timber management regimes for the Late-Successional Reserves or Connectivity/Diversity Blocks would certainly yield much lower PNVs than those of the General Forest Management Area, if only timber harvest values are considered.*

COMMENT: While it may have been done, or is a part of Stand Projection System, it is not clear what, if any, economic analyses and associated sensitivity tests have been done. For the General Forest Management Area, do you know the most economically efficient management regime? That is, which regime yields the highest present net value?

RESPONSE: *Each of the intensive management practices considered for application in the General Forest Management Area have been evaluated for their effect on present net value. These analyses were based on the yield outputs of the Stand Projection System (SPS) model. Although SPS is useful for providing estimates of future stand growth and yield under a selected management regime, it cannot reliably be used to choose an optimum regime.*

Old Growth Forest

COMMENT: The preferred alternative should be evaluated in terms of the Congressional report on "Alternatives for Management of Late-Successional Forests of the Pacific Northwest." Where does the preferred alternative fall on the chart on pages 31-2, especially with regard to "retaining ecologically functional Late Successional/Old Growth forests and associated species for a century or longer?"

RESPONSE: *The proposed resource management plan is based on management direction in the record of decision for the SEIS. Management direction in the record of decision was developed based on many pre-existing scientific documents including the report mentioned in this comment.*

COMMENT: The age-based definition of old-growth forests is inadequate. They should instead be defined on the basis of their ecological characteristics.

RESPONSE: *Based on observations in the Salem District, BLM disagrees that an age-based definition is inadequate. Stands aged 200 years and older appear to fit the current perception of what old growth is like. There are some stands in the Salem District that have a sparse overstory of old-growth trees and a dominant understory of younger trees. These stands were not included as old growth. They include approximately 12,000 acres of forest.*

Socioeconomic

COMMENT: The Salem District has assumed worker migration, counseling, retraining and other social programs will mitigate employment and income losses expected under several alternatives. There is no information to support such claims.

RESPONSE: *The draft resource management plan states that "Incentives or economic assistance could be provided by federal, state, or local governments to partially mitigate these impacts" (see chapter 4-74). BLM has not assumed total mitigation of these impacts. As stated in chapter 4, adverse social and economic impacts would occur under some alternatives. The state of Oregon is anticipating such impacts and responding through a Coordinated Timber Response Plan (see chapter 4-74). The Clinton Administration responded by proposing to Congress an economic stimulus funding package for western Oregon. If this funding is approved, BLM will be preparing resource development contracts to stimulate local business.*

COMMENT: Most of the people that visit the Nestucca-Yamhill Riding Area stop for gas, snacks, and meals at Willamina, Sheridan, and other local communities. The area also broadens recreation opportunities for nearby communities. These opportunities, as well as the money brought into these towns, should be mentioned in your "Community Stability" section.

RESPONSE: *A statement to this effect for all communities in the district is included in the community stability section. The actual extent to which specific communities would benefit is unknown.*

COMMENT: In your calculations of income to counties have you factored in the lower value of the timber to be produced?

RESPONSE: *We believe timber produced on BLM-administered lands will continue to be of high value. In estimating income to counties based on timber sales receipts, no adjustment was made for future differences in type of wood harvested. As reported in the chapter 4 discussion of Socioeconomic Effects, in comparison to the 1984-1988 baseline period, higher prices for wood are expected due to the reduced supply from federal lands.*

COMMENT: The preferred alternative would result in harvests and revenues to the counties that are only slightly more than half of the historical levels. This can hardly be viewed as a credible attempt to provide "a permanent source of raw materials for the support of dependent communities and local industries of the region."

RESPONSE: *One of the purposes of ecosystem management is to find a long-term solution to the western Oregon forest management crisis. If the proposed resource management plan becomes the solution, a permanent source of raw materials will be available to help mills continue producing or once again produce lumber.*

COMMENT: The no action alternative shows a harvest of 239.2 million board feet as compared to the 136.5 million board feet for the preferred alternative. Yet in table 4-33, page 4-72, the payments to counties is essentially equal under both. This is due to an assumed doubling or more of stumpage values. I realize that the U.S. Forest Service has provided you with these numbers. What other estimates of stumpage value have you considered, along with historical evidence of changes in stumpage value?

RESPONSE: *No other estimates of stumpage value were considered. The Timber Assessment Market Model is based on historical evidence of changes in stumpage value. Additional discussion of timber pricing is found in appendix CC.*

Roads

COMMENT: Another issue concerning roads is the need to be consistent in information about public access. As noted on page 3-6, only 50 percent of the existing road network is open to public use. Throughout the plan, there are other comments which ignore this restriction. These include: "Some 287,700 acres would be open year-round to motorized vehicle use (see table 2-1)" (p. 2-37 and p. 2-48).

RESPONSE: *Nearly 86 percent of the existing road network is open to public vehicular travel (2,143 miles open; 360 miles closed). The 50 percent figure discussed on page 3-6 applies to the amount of BLM-administered land having legal public access. These are two distinctly different issues. With respect to off-highway vehicle designations, the process does not consider availability of public access. There are several reasons for this: (1) users may obtain permission to cross private land to get to BLM-administered land; (2) many contiguous parcels of BLM-administered are accessible by trail; and (3) future road building by BLM may provide access.*

Rural Interface

COMMENT: It is disturbing to see the BLM opting for minimal management in rural interface areas in an attempt to avoid disagreements with adjacent landowners. We suggest site-specific adjustments to general forest management area prescriptions where necessary rather than imposing visual resource management classification VRM II restrictions in all interface areas.

RESPONSE: *As stated in chapter 2 of the draft resource management plan (chapter 2-38), "Special management practices would be considered on a case-by-case basis in [rural interface areas]". The visual resource management classes selected by area managers would apply in these areas. They vary from class I to class IV.*

COMMENT: Rural interface areas - we concur with the preferred alternative in the plan. However, the plan should be expanded to include the added cost of fire protection created by dwellings.

RESPONSE: *A statement about the added cost of fire suppression has been added to chapter 3, Rural Interface Areas. Since the placement of dwellings on private land is not controlled by BLM, the added cost of fire suppression due to dwellings is not an appropriate impact to address in the proposed resource management plan/final environmental impact statement.*

COMMENT: The significance and impact of management activities in rural interface areas was inadequately addressed in the draft plan. The Mt. Hood Corridor as a rural interface area was not addressed at all.

RESPONSE: *There are too many rural interface areas in the district to address them individually in this document. Also, information regarding number of dwellings, attitudes of residents, etc., is generally not available. Individual areas will be addressed in future watershed analysis site-specific plans and environmental assessments.*

The impacts of future BLM management activities in the Mt. Hood Corridor were considered minimal in the draft resource management plan analysis due to a combination of land use allocations, including visual resource management classes I and II, special recreation management area, wild and scenic river corridor and Connectivity/Diversity Block(s) (i.e., 200-year timber harvest rotation). Impacts in the proposed resource management plan will be further reduced by allocation of the ridge-to-ridge area along the Mt. Hood Highway as visual resource management class I. The visual resource management class I classification applies only to BLM-administered lands.

Fire

COMMENT: How long can you cut off all vegetation--then burn the rest--and expect to continue growing trees on such abused soil?

RESPONSE: *The Salem District used the FORCYTE II model (see appendix T) to analyze the many varied prescriptions that could be used under the proposed alternatives by three levels of broadcast burning. The analysis determined the long-term productivity trend and site quality trend from the various prescriptions by the various average sites identified on the district. Many of the management scenarios indicated that long-term productivity and site quality could be maintained and or enhanced through management. This is increasingly the case as we avoid or use light broadcast burns for site preparation, increase fertilizer use, increase rotation lengths and leave a legacy of large wood on the site to provide for soil maintenance.*

COMMENT: From a fire prevention and suppression aspect, will the BLM be responsible for the additional hazard presented by retaining "biological legacies" on their lands? With the drop in timber receipts, where will the additional monies come from to pay for the "insurance" for fire protection/suppression?

RESPONSE: *Biological legacies will be similar to those that occur naturally. Their appearance will vary from site to site. All activities which create forest fuels are analyzed in relation to fire hazard. The BLM has the responsibility to determine fire hazard and the obligation to mitigate any such hazards by appropriate fuels management treatments. Consequently, we do not presume these legacies to be considered "additional hazard" under the current Oregon fire law. The BLM works with the Oregon Department of Forestry to ensure management activities are consistent with state statutes.*

Funding for fire protection does not come from timber receipts. Consequently, timber receipts do not directly impact fire protection on BLM-administered lands. Fire protection funding is appropriated through Congress for all BLM-administered lands including Western Oregon. This includes contributions to the Forest Land Protection Fund for the suppression costs beyond what is included in the current contract. Wildfires which are the responsibility of the BLM are paid from the federal emergency fire account.

COMMENT: The comments concerning "conditional fire suppression" on page 2-20 should not apply in those areas where fires on BLM property could spread to private land. It would be irresponsible for BLM personnel to limit efforts in fire suppression, subjecting private lands to additional fire risk.

RESPONSE: *The BLM fire planning manual states that all suppression efforts will be intensive or conditional.*

Intensive suppression implies that no amount of resource loss is acceptable.

Conditional suppression implies the suppression activities (presuppression and suppression) will be commensurate with the values at risk. It does not imply that the BLM has a choice or decision to make suppressing any fire occurring on BLM-administered lands. All fires on BLM-administered lands will be aggressively suppressed. The protection standard for BLM-administered lands is the same for private industrial and nonindustrial lands.

There is no implied limitation on fire suppression strategy or tactics. The BLM will continue to work closely with all landowners during suppression actions in accordance with protection contract with the Oregon Department of Forestry. Consequently, the adjacent private lands are not subject to additional fire risk.

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